

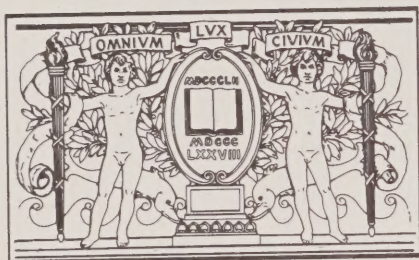
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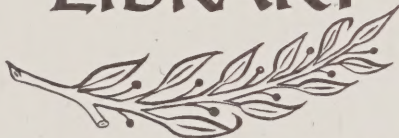
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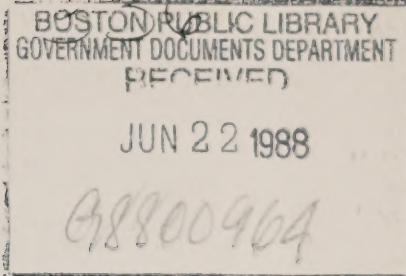












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THE ECONOMIES OF BOSTON AND THIRTY-FOUR  
OTHER LARGE CITIES: COMPARATIVE ANALYSIS

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## I. Introduction

According to the usual indicators, Boston's economy has been robust in recent years. In March 1987, the Boston metropolitan area's unemployment rate of 3.6 percent was the lowest among the nation's largest metropolitan areas. In 1986 and 1985, Boston also had the lowest unemployment rates: 3.3 percent and 3.4 percent respectively. It had the third lowest rate in 1984, 4.1 percent.

Moreover, the city's downtown area has enjoyed an extensive revitalization during the past decade. In 1984, construction activity in the city reached its highest level as over \$1.1 billion of new commercial and residential construction and renovations were completed. <sup>1</sup>

This striking performance raises two questions: how does the Boston's economy compare to that of the other 34 largest metropolitan areas in the United States and what is the source of this comparative success?

This report centers on the structure of the economic base of Boston and of other large cities in the US between 1969 and 1984, since the economic well being of an area is closely related to its industrial mix and the resultant patterns of employment.

Most of the analysis included here emphasizes metropolitan areas as units rather than central city counties or the central

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<sup>1</sup> Residential and commercial construction amounted to \$484,748,000 in 1985, \$681,341,000 in 1986 and is \$947,907,000 in 1987. Figures are in 1986 dollars (BRA Research Department, Development List, April 1987).



cities themselves. Few economic data are available on the central cities per se. Metropolitan areas are more comparable than individual counties; their boundaries are drawn to reflect economic functions and economic linkages as well as commuting patterns primarily between their central cities and the areas around them. Although metropolitan areas are made up of a number of counties, in the aggregate they provide a more adequate unit of comparison of economic and demographic change than do individual central city counties for our purposes.

Central city county data, however, can provide accurate information for a city if the county boundaries closely approximate those of the city. For the cities in which this is the case, and Boston is one, an analysis was conducted which is similar to that done for metropolitan areas.

The remainder of this report is divided into 4 sections.

Section II provides general demographic and housing statistics on the cities included in our study.

Section III examines in detail the industrial structure of metropolitan areas and central city counties. Location quotients, indicators of the degree of economic specialization of a region as compared to the US economy based on absolute employment figures, are generated for each metropolitan area. The metropolitan Boston quotients indicate that in 1984 the area continued to be relatively specialized in service-producing industries such as Finance, Insurance, and Real Estate, Services, Wholesale and Retail trade, and Transportation and Public

Utilities. This relative specialization had lessened since 1969, however, not because Boston experienced an employment decline in these sectors , but because these industries were more heavily represented in the US economy in 1984 than they were in 1969.

Section III also presents detailed information on the patterns of growth in employment by industrial sector across cities and time periods. These patterns identify which sectors of which cities' economies experienced rapid growth during 1969-1984. Over this period, Boston experienced a progressive movement from being ranked below the US growth trend to being ranked above it. As expected, cities in high growth regions of the US, such as Phoenix or Dallas, were those with high employment growth. Nevertheless, it is striking that some of the cities with high employment growth were also among those with high unemployment rates.

Section IV highlights the role of central city counties in their metropolitan areas. Uniformly, central city counties account for a declining share of metropolitan area population: Suffolk County accounted for 23.6 percent of the Boston metro <sup>2</sup> area in 1959, 19.6 percent in 1972 and 17.8 percent in 1984. Counties' share of total metro area employment have similarly declined. For Suffolk County, the share was 33.3 percent in 1969, 31.9 percent in 1972, 28.3 percent in 1978 and 26.6 percent in 1984. This section of the report presents a similar ratio

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<sup>2</sup> The Boston metropolitan area is not a Primary Metropolitan Statistical Area but a New England County Metropolitan Area.



computed for all sectors of economic activity. It provides an indication of those sectors for which some central city counties have retained the bulk of metropolitan area employment. Finally, section IV also provides employment to population ratios for central city counties and metro areas. These ratios indicate the extent to which cities are employment centers for their surrounding regions.

Appendix A provides details on the U.S. Bureau of Economic Analysis database used for this study; Appendix B presents our rationale for selection of the years included in the study, Appendix C contains information on cities with increases in land area, Appendix D contains data on downtown retail markets and Appendix E compares employment levels and employment growth in metropolitan and non metropolitan areas of the United States.

This report can be used both as a source of comparative information on the Boston economy and as a primary resource on the economy of any of the major metropolitan areas which are included in the study.

#### Summary Findings:

Shifts in the US economy All 35 metropolitan areas in this study participated in the general shift of the US economy away from goods-producing sectors, manufacturing, construction, mining, towards services-producing sectors, finance, insurance and real estate, services ( hotel, medical and educational services, as well as business, professional and personal services), and transportation and public utilities. Not

surprisingly, urban areas are on average more likely to share in the trend toward services production than rural areas. Between 1969 and 1984, employment in service producing industries as a share of total employment increased across all 35 metropolitan areas, just as it did in the national economy as a whole where it went from 29 percent to 36 percent.

This shift in the distribution of employment was due to differential rates of growth across economic sectors. For instance, between 1969 and 1984, employment in the Finance <sup>3</sup> and the services sectors grew at annual rates of 3.95 and 3.83 percent respectively.

Over the same period, manufacturing employment in the US as a whole declined at an average annual rate of -0.24 percent. The decline was not uniform over the whole period, however. Manufacturing employment declined at a rate of -1.96 percent between 1969 and 1972, grew at an annual rate of 1.32 percent from 1972 to 1978, and declined again between 1978 and 1984 at an annual rate of -0.91 percent. Moreover, the 1969-84 decline was not uniform across metropolitan areas. Traditionally industrial metropolitan areas such as Buffalo, Cincinnati, Cleveland, Chicago, Detroit, and Philadelphia shed significant numbers of manufacturing jobs over the period, while others such as San Jose experienced significant job growth.

Assessing economic performance Broad shifts in the industrial mix of individual metropolitan areas over the 1969-

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<sup>3</sup> Finance, insurance and real estate.



1984 period help account for their differential economic performance in recent years. In this report, economic changes in individual metropolitan areas are compared to those in the national economy and in other metro areas.

Economic performance is broadly measured in terms of unemployment rate and employment growth. The study does not look at other indicators of economic well-being such as the level of wages or per capita income. The unemployment rate of an area is affected by employment growth but also by the size and growth of its labor pool, as well as by the nature of its industries. An area with high job growth can also experience high unemployment if its labor force grows even more rapidly than employment, through in-migration for instance. Conversely, an area with moderate but sustained job growth, accompanied by a slowly growing workforce, will experience low unemployment, as is the case with Boston. For illustration, the change in the Boston metro area population is a rough indicator of the evolution of the size of the area's workforce. The metro area population went from 3,337,000 persons in 1959 to 3,755,300 in 1972 and to 3,695,400 in 1984. It changed at an annual rate of 0.91 percent between 1959 and 1972, -0.35 percent between 1972 and 1978 and 0.08 percent between 1978 and 1984. In contrast, metropolitan Houston population grew from 1,329,500 in 1959 to 2,015,500 in 1972, 2,538,500 in 1978 and 3,164,200 in 1984. The population of this sunbelt metro area grew at high annual rates of 3.25 percent

from 1959 to 1972, 3.92 percent from 1972 to 1978 and 3.74 percent from 1978 to 1984.

The industrial mix, as represented by the distribution of employment, bears on unemployment. Thus, cities with a significant specialization in traditional manufacturing activities are bound to have experienced more unemployment than those specialized either in new industrial activities or in growing segments of services. Similarly, cities specialized in high-growth but highly cyclical economic activities, be they goods-producing or services-producing, are also likely to experience high unemployment at times.

The Boston economy in comparative perspective Boston was among the metropolitan areas with an economy already heavily weighed towards service-producing industries, Finance, services and transportation in 1969, along with, for instance, San Francisco and New York City. In 1984, Boston continued to have an even more significant share of its jobs located in the service sectors. The share of employment in service sectors for the Boston metropolitan area was 42 percent, as compared to 35 percent in 1969.

Location quotients indicate, nevertheless, that by 1984 the Boston metropolitan area had experienced a decline in its relative specialization in service production, particularly in the Finance sector. This was also true of several other metropolitan areas which were specialized in service producing activities in 1969 and had experienced a decline in their



relative specialization by 1984. A definition of the location quotient for a given industry is useful here. For example, the location quotient of the Finance sector in the Boston area is the share of Finance employment in the Boston metropolitan area total employment in relation to the share of U.S. Finance employment in total U.S. employment. Therefore, the location quotient of an industry in an area is affected by the growth of the industry in the metro area and in the US and by the growth of total employment in the metro area and in the nation. The location quotient for an industry is an indicator of the specialization of an area relative to the overall specialization of the US economy. It also provides a rough indication of sectors which might engage in export activity since a metro area is likely to export to the rest of the US economy the output of industries in which it is particularly specialized.

The decline in relative specialization indicated by location quotients occurred because the growth rate of employment, between 1969 and 1984, in service producing sectors of the US economy was much greater than that of other industries and, therefore, than that of total US employment. As a result, service producing sectors substantially increased their share of total US employment. They also increased their share of employment in metro areas specialized in services but did so less rapidly, hence the decline in relative specialization noted above.

This pattern is particularly true for the Finance and the

transportation sectors.<sup>4</sup> It is less true for the category of services per se (business, professional and personal services and medical and educational services as well as hotels), which grew in the Boston metro area about as fast as in the US economy over the whole period, and faster over the recent years 1978-84. As a result, the Boston metro area retained its high location quotient for this portion of service producing industries.

A somewhat surprising finding is that the manufacturing location quotient for the Boston metropolitan area increased between 1969 and 1984. This increase was due to the more drastic reduction in the relative weight of manufacturing in the US economy compared to some increase in manufacturing employment in the Boston metropolitan area. Unlike areas such as Detroit and Buffalo, the Boston metro area already had lost by 1969 a significant share of its traditional manufacturing activity: in textiles, leather, and garments for example. Most of the growth in manufacturing employment which the Boston metro area experienced between 1969 and 1984 was in new industries which were expanding and not declining. Thus, even though Boston is mainly a service-producing metropolitan area, it experienced an increased relative specialization in manufacturing between 1969 and 1984. However, the manufacturing location quotient for Suffolk County, a close approximation of the City of Boston,

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<sup>4</sup> Boston metropolitan F.I.R.E. employment grew at a rate below the national trend between 1969 and 1978. For the 1978-84 period, it grew as fast as F.I.R.E. employment in the rest of the US economy.



remained low and declined over the period. The increase in manufacturing activity of the metropolitan area had not been reflected in the City of Boston. Nor were the new manufacturing jobs likely to be taken by Boston City residents because most were located outside the city limits.

Metropolitan areas specializing in services Metropolitan areas with a large share of total employment in service producing activities -- such as New York, San Francisco, Boston and Washington, DC-- displayed a wide array of performance in terms of unemployment in the 1980's. Clearly none was among those metropolitan areas with the highest unemployment rates. Some such as San Francisco, the area with the highest share of employment in service sectors in 1969 and 1984, and Boston were among those with low unemployment rates.

As noted in the case of metropolitan Boston, location quotients indicate that many service oriented metropolitan areas no longer have a striking specialization in service-producing sectors compared to the US economy. This pattern occurs even though, in many of these areas, service industries experienced employment growth and have acquired a greater weight in the total employment of each metropolitan area.

The Finance sector and, to some extent, the transportation and public utilities sector are those most affected by this declining trend. However, the category of services, services to individuals and to businesses, grew as a share of employment as fast, if not faster, in many service oriented metropolitan areas

than in the US as a whole. Thus, these metropolitan areas have retained their high location quotient in this sector and in some instances have increased it.

The case of "rust-belt" metropolitan areas      The fate of so-called "rust-belt" metro areas remained in question by 1984. Areas such as Buffalo, Cincinnati, Cleveland, Chicago, Detroit, Philadelphia, and Pittsburgh had shed significant numbers of manufacturing and mining jobs since the mid-seventies and experienced high unemployment rates through the 1980's. For instance, between 1969 and 1984, the Detroit metro area lost 177,205 manufacturing jobs at an annual rate of -2.14 percent. The largest decline took place during the 1978-84 period, with an annual rate of -4.66 percent. Between 1969 and 1984, the Buffalo metro area lost 55,004 jobs in manufacturing at an annual rate of 3.35 percent; the largest decline took place in the periods 1969-1972 and 1978-84 with annual rates of decline of -5.22 percent and -4.82 percent respectively. Cleveland lost 104,028 manufacturing jobs at an annual rate of -2.59 percent over the 1969-84 period; one of -4.89 percent for 1969-1972 and one of -4.24 percent for the recent period 1978-84.

For rust-belt cities it is useful to determine in which sectors some metro areas did experience employment growth in the recent period 1978-84 so as to identify emerging areas of economic activity and to differentiate among those cities which might experience continued decline and those which might replace some of their lost employment in new sectors.



Manufacturing location quotients declined between 1969 and 1984 for a number of industrial metro areas. Nevertheless, many of these areas retain fairly high location quotients for manufacturing because, even though the relative weight of manufacturing in their total employment declined significantly, it still remained high compared to the same weight for the US.

The metro areas of the rust-belt, like all metro areas in the study, experienced employment growth in the services sector between 1978 and 1984. Clearly, for metro areas in the rustbelt, service producing sectors are looked upon as an alternate source of economic activity. Yet service-producing activities should be differentiated between those that are consumed locally, for example serve local businesses and individuals, and those that are "exported", that is serve businesses outside the area, or individuals who come in the area to obtain a service. Similarly, some service-producing activities might be tied to the fortunes of another local industry, often one producing goods, while others are not.

Several of the metro areas most severely affected by manufacturing decline, such as Detroit, Buffalo, Pittsburgh and Cleveland, were among those showing the lowest positive changes in employment in services. Many others were below the national trend during the 1978-84 period.

However, the aggregate level of employment change in the services sector does not identify which segment of the service sector, local or export oriented, grew in most rust-belt metro

areas. It is difficult to determine from these data whether the services sector of rust-belt metro areas would have grown faster, had these areas not experienced a drastic decline in manufacturing employment. Services location quotients for several rustbelt metro areas including Detroit, Cleveland and Chicago increased between 1969 and 1984, indicating that these metro areas might provide more services to their region.

Some of the rustbelt cities which were among those hardest hit by manufacturing or mining decline, increased their employment in the Finance sector. For instance, the Finance sector of the Buffalo, Chicago, Milwaukee, New Orleans and Philadelphia metro areas grew between 1978 and 1984 at annual rates close to the national trend. A few of these witnessed an increase in their location quotient. Yet, the Detroit metro area did not experience any growth in Finance employment during the period. Most likely, the Finance sector only grew in those metro areas in which its activity was not primarily connected to that of a goods-producing industry as was likely the case in Detroit with the automobile industry and its suppliers network.

Thus, any assessment of the potential benefit of service-producing employment to the rust-belt metro areas with an ailing economy should recognize that growth in the Finance industries, in the transportation sector, or in services per se (hotels, medical and educational services, and business, professional and personal services), will only benefit these areas if the latter become specialized in the growth, export oriented, segments of



these sectors which are not linked to declining local manufactures.

New manufacturing centers A number of metropolitan areas experienced growth in manufacturing employment over the period. Because such growth was contrary to the trend of manufacturing employment in the US economy, metropolitan areas such as San Jose, a center of high technology manufacturing, Los Angeles, and Minneapolis-St. Paul also experienced an increase in their manufacturing location quotient, a quotient which already indicated a slight specialization in manufacturing in 1969. Other metro areas such as Phoenix or Dallas experienced growth in manufacturing employment but did not become more specialized because other sectors of their economy grew as quickly. Finally, manufacturing employment grew in metro areas such as El Paso, Oklahoma City, San Antonio, San Diego, and Washington, DC. These were not manufacturing centers in 1969 and remained so in spite of increases in their manufacturing location quotients by 1984.

Areas with heavy mining activity Metropolitan areas with heavy mining activity displayed a degree of specialization in this sector, represented by location quotients, which was much higher than the degree of specialization of rust-belt cities in manufacturing or of service areas in services. Coal mining areas sustained heavy job losses between 1969 and 1984, with the worse decline occurring in the latter part of the period. For instance, the Pittsburgh metropolitan area lost 1,411 jobs in mining between 1969 and 1984 but the area had, first, gained

2,924 jobs between 1969 and 1980 and then lost 4,335 jobs between 1980 and 1984.<sup>5</sup> While this job loss was small in absolute terms, it induced a decline of the mining location quotient between 1969 and 1984 reflecting the fact that the weight of mining in metropolitan Pittsburgh total employment went from being above the average for the nation to below the national average. The Pittsburgh metro area also lost 107,940 jobs in the manufacturing sector, mostly in the steel industry, putting this area among those with the highest unemployment rates during the 1980's.

Metro areas of the sun-belt which specialized in petroleum production and related activities had disparate experiences over the period 1969 to 1984. Many retained or even increased their high mining (petroleum) location quotients. Most, if not all, experienced high levels of employment growth in the oil industry and the sectors related to it such as wholesale trade and construction. By the late 1980's, however, mining areas could be found among those with highest and those with lowest rates of unemployment. Dallas and Fort Worth had low rates while Houston and New Orleans (pipe-lines, refining, off-shore drilling) had high rates. Possibly, Dallas developed and retained employment in sectors other than mining, such as Finance activities, while an area like Houston remained heavily dependent on the oil industry and thus especially vulnerable to the slump in oil prices in the second half of the 1980's. It is striking that the

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<sup>5</sup> Data for the mining sector are not available for Pittsburgh for 1978.

Houston metro area had high unemployment rates in 1986 even though it experienced an annual growth of total employment at a rate of 4.83 percent from 1969 to 1984, and one of 3.49 percent during the 1978-84 period.

A final note on employment growth and unemployment In terms of unemployment, metropolitan areas which fared well in the 1980's were often those with an economic base covering a broad range of sectors or specialized in a few sectors experiencing moderate but steady growth. Boston, San Francisco and Washington, DC were mainly service-producing cities with Boston displaying an additional light specialization in manufacturing by 1984. Atlanta, Kansas City and Nashville were metro areas which displayed in 1984 a light degree of specialization in a broad range of economic activities: construction, transportation, wholesale and retail trade, and Finance; with the addition of manufacturing for Nashville and of services for both Nashville and Kansas City.

The metro areas with high unemployment rates in the second half of the 1980's were either areas which had lost a significant share of their main industrial base, like Detroit and Cleveland, or whose economic base was shaped by the activity of one sector which happened to experience a downturn, such as, mining in New Orleans, Pittsburgh, and Houston or in El Paso federal military and civilian employment.

As noted earlier, several metro areas could experience high unemployment in the second half of the 1980's following



employment growth in the period 1978-84. In terms of aggregate employment change for the 1978-84 period, Cleveland, Detroit, and Pittsburgh experienced declining annual rates but New Orleans did not. For the entire 1969-84 period, the first three metro areas experienced very little employment growth while New Orleans experienced moderate growth. New Orleans exemplifies the case in which high unemployment rates can follow aggregate employment growth.

Central city counties In the case of about half the metropolitan areas in this study, the boundaries of central cities approximated those of the counties in which they were located. Thus, a central city county's share of a metropolitan area's employment was very similar to the role of its city in the employment picture of that metropolitan area.

There was great variation across cities in the share of metropolitan area employment accounted for by their central city county. Yet, virtually all shared the same tendency over time. By 1984, almost all central city counties accounted for a smaller share of metropolitan area total employment than in 1969. The fact that cities played a decreasing role in employment in their metropolitan area might not bode well for their residents. Most of the employment growth witnessed by many metropolitan areas might not benefit central city residents if the latter do not have access to employment in suburban communities either because of transportation difficulties or because of a mismatch of qualifications.

The shares of county employment in total metropolitan area employment for specific industrial sectors indicate a significant degree of variation by industrial sector. As expected, cities retained their primary role as centers of service production. In 1984, many central city counties had either retained, or even increased, their share of total metropolitan area employment in the following sectors: Finance, Services, Transportation, Government or Wholesale and Retail Trade. In addition, by 1984, central city counties tended to account for a higher share of metropolitan area earnings by sector than of metropolitan area employment, an indicator of higher wage levels in core cities. This was particularly true for the Finance sector.

The aggregate employment picture of declining employment concentration in the central city was mitigated, and frequently improved, in the case of service-producing sectors. Furthermore, service-producing activities, at least in some cases, tended to generate higher earnings in 1984 in the central city counties than in the metro areas as a whole. City dwellers might be better off than residents of surrounding communities if they are employed in sectors providing those higher earning levels. They would fare less well in cases where they are employed in industries which have reduced their activity in the central city, or which have lower levels of earnings.

The potential of services to individuals and businesses as a motor for growth in central cities can be assessed by comparing county shares of employment to county shares of metro earnings

for 1984. Counties with a share of metro employment in services which is higher than their share of metro service earnings are likely to be specialized in low-earnings services such as food services. Conversely, counties with a share of earnings which is higher than their share of metro area employment in services are more likely to be specialized in high earnings, high value-added, services. Such specialization is relative only to service jobs in each metropolitan area and not to service employment in other counties, metro areas or the nation.

In 1984, the Suffolk county share of Boston metro earnings in services was 34.72 percent versus a share of metro employment in services of 31.80 percent. Earnings per worker in services were higher on average in Suffolk County than in the rest of the Boston metro area. The reverse was true in the case of Detroit. In 1984, Wayne county represented 50.87 percent of metropolitan Detroit services earnings, but 52.70 percent of metropolitan services employment.



## II. Boston and the other 34 largest cities in the United States:

### 1. Population:

The 35 cities included in this study are those whose population was over 400,000 persons in 1979, 1980, or 1984. Table 1 provides population levels for all these cities as well as their relative ranking. In 1984, Boston ranked 20th among the 35 cities. It ranked 21st in 1980 and 17th in 1970. The top 10 ranking cities in 1984 were: New York, Los Angeles, Chicago, Houston, Philadelphia, Detroit, Dallas, San Diego, Phoenix, and San Antonio.

Some of the cities in the study experienced an increase in land area which also affected their population size. Those which experienced a significant increase in land area between 1970 and 1979 were: San Antonio, Columbus, Phoenix, Memphis, Houston, Dallas, Denver, Ft. Worth and San Jose (see Appendix C).

### 2. Demographic and housing statistics for Boston and 12 major cities:

Table 2 provides selected demographic information for Boston and 17 major cities which include the top 10 cities mentioned above and the major city for each Census region. The cities are grouped by region: New York, Baltimore, Philadelphia, Washington D.C., Atlanta, Chicago, Detroit, Minneapolis, Dallas, Houston, San Antonio, Phoenix, Denver, San Diego, San Francisco, Los Angeles, and Seattle. Boston's population experienced a -12.2% decline between 1979 and 1980, and a 1.4% rise from 1980 to 1984. Along with Minneapolis and Denver, Boston had one of the lowest

proportions of non-whites among its residents in 1980. Along with Dallas and Atlanta, it had one of the youngest populations, with a median age of 28.9. Among these 12 cities, Boston's median household income for 1979 was the 2nd lowest after Atlanta; a reflection either of the presence of a large student population or of the earnings power of jobs available to the city's residents during that year. Similar data for more recent years have not yet been released.<sup>1</sup>

Table 3 presents selected descriptive statistics on the housing stock. Boston was among those cities with a housing stock mostly constituted of structures of more than 5 units and with a majority of its structures built by 1939.

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<sup>1</sup> While data on median household income are not available for more recent years, data on annual pay levels for the entire Boston metro area put Boston among those areas with the highest growth rates in pay levels since 1980.

Table 1. Population of the 35 Largest Cities, 1984, 1980 and 1970

|                | Population<br>7/01/84 | Rank<br>1984 | Population<br>4/01/80 | Rank<br>1980 | Population<br>4/01/70 | Rank<br>1970 |
|----------------|-----------------------|--------------|-----------------------|--------------|-----------------------|--------------|
| New York       | 7,164,742             | 1            | 7,071,639             | 1            | 7,895,563             | 1            |
| Los Angeles    | 3,096,721             | 2            | 2,968,579             | 3            | 2,811,801             | 3            |
| Chicago        | 2,992,472             | 3            | 3,005,072             | 2            | 3,369,357             | 2            |
| Houston        | 1,705,697             | 4            | 1,595,138             | 5            | 1,233,535             | 6            |
| Philadelphia   | 1,646,713             | 5            | 1,688,210             | 4            | 1,949,996             | 4            |
| Detroit        | 1,088,973             | 6            | 1,203,369             | 6            | 1,514,063             | 5            |
| Dallas         | 974,234               | 7            | 904,599               | 7            | 844,401               | 8            |
| San Diego      | 960,452               | 8            | 875,538               | 8            | 697,471               | 15           |
| Phoenix        | 853,266               | 9            | 790,160               | 9            | 584,303               | 22           |
| San Antonio    | 842,779               | 10           | 785,927               | 11           | 654,153               | 16           |
| Baltimore      | 763,570               | 11           | 786,741               | 10           | 905,787               | 7            |
| San Francisco  | 712,753               | 12           | 678,974               | 13           | 715,674               | 14           |
| Indianapolis   | 710,280               | 13           | 700,807               | 12           | 737,039               | 12           |
| San Jose       | 686,178               | 14           | 629,402               | 18           | 459,913               | 30           |
| Memphis        | 648,399               | 15           | 646,170               | 14           | 623,988               | 18           |
| Minn.-St. Paul | 624,238               | 16           | 641,181               | 15           | 744,266               | 11           |
| Washington     | 622,823               | 17           | 638,432               | 16           | 756,668               | 9            |
| Milwaukee      | 620,811               | 18           | 636,298               | 17           | 717,372               | 13           |
| Jacksonville   | 577,971               | 19           | 540,920               | 23           | 504,265               | 27           |
| Boston         | 570,719               | 20           | 562,994               | 21           | 641,071               | 17           |
| Columbus       | 566,114               | 21           | 565,032               | 20           | 540,025               | 23           |
| New Orleans    | 559,101               | 22           | 557,927               | 22           | 593,471               | 20           |
| Cleveland      | 546,543               | 23           | 573,822               | 19           | 750,879               | 10           |
| Denver         | 504,588               | 24           | 492,694               | 25           | 514,678               | 25           |
| Seattle        | 488,474               | 25           | 493,846               | 24           | 584,453               | 21           |
| El Paso        | 463,809               | 26           | 425,259               | 29           | 322,261               | 35           |
| Nashville      | 462,450               | 27           | 455,651               | 26           | 426,029               | 32           |
| Oklahoma City  | 443,172               | 28           | 404,014               | 32           | 368,164               | 34           |
| Kansas City    | 443,075               | 29           | 448,028               | 28           | 507,330               | 26           |
| St. Louis      | 429,296               | 30           | 452,804               | 27           | 622,236               | 19           |
| Atlanta        | 426,090               | 31           | 425,022               | 30           | 495,039               | 28           |
| Fort Worth     | 414,562               | 32           | 385,164               | 34           | 393,455               | 33           |
| Pittsburgh     | 402,583               | 33           | 423,960               | 31           | 520,089               | 24           |
| Cincinnati     | 370,481               | 34           | 385,410               | 33           | 453,514               | 31           |
| Buffalo        | 338,982               | 35           | 357,870               | 35           | 462,768               | 29           |

Source: US Department of Commerce, Bureau of the Census, State and Metropolitan Area Databook 1986; County and City Data Book 1983.



Table 2. Population, Race, Ethnicity, Age, Household Composition, Income;  
Boston and Selected Large Cities, 4/01/80; Except where Noted.

|                                                       | Boston   | New York  | Baltimore | Philadelphia | Washington<br>D.C. | Atlanta  |
|-------------------------------------------------------|----------|-----------|-----------|--------------|--------------------|----------|
| Land Area (sq.mi.) ('80)                              | 47.2     | 301.5     | 80.3      | 136          | 62.7               | 131      |
| Population ('80)                                      | 562,994  | 7,071,639 | 786,775   | 1,688,210    | 638,333            | 425,022  |
| Percent Change '70-80                                 | -12.2    | -10.4     | -13.1     | -13.4        | -15.6              | -14.1    |
| Population per Square Mile                            | 11,928   | 23,455    | 9,798     | 12,413       | 10,181             | 3,244    |
| Race (percent of total)                               |          |           |           |              |                    |          |
| White                                                 | 70.5     | 61.5      | 44.1      | 58.5         | 27.4               | 32.5     |
| Black                                                 | 22.5     | 25.3      | 54.8      | 37.8         | 70.2               | 66.6     |
| Asian & Pacific Islander                              | 2.9      | 3.5       | 0.6       | 1.2          | 1.1                | 0.5      |
| Spanish Origin                                        | 6.5      | 19.9      | 1.0       | 3.8          | 2.8                | 1.4      |
| Age (percent)                                         |          |           |           |              |                    |          |
| Under 5 Years                                         | 5.3      | 6.7       | 6.7       | 6.4          | 5.4                | 7.1      |
| 5 to 17 Years                                         | 16.3     | 18.3      | 20.3      | 19.5         | 17.1               | 19.7     |
| 18 to 64 Years                                        | 65.7     | 61.5      | 60.2      | 60.0         | 65.9               | 61.7     |
| 65 Years and Over                                     | 12.7     | 13.5      | 12.8      | 14.1         | 11.6               | 11.5     |
| Median Age (years)                                    | 28.9     | 32.7      | 30.2      | 31.7         | 31.1               | 28.9     |
| Persons Born in State Where<br>Now Residing (percent) | 58.0     | 56.2      | 70.3      | 73.0         | 38.5               | 72.2     |
| Households                                            | 218,457  | 2,788,530 | 281,414   | 619,781      | 253,143            | 162,553  |
| Persons per Household                                 | 2.40     | 2.49      | 2.74      | 2.66         | 2.40               | 2.51     |
| Family Households (percent)                           | 53.3     | 63.0      | 66.7      | 66.6         | 52.8               | 60.1     |
| Nonfamily Households (percent)                        | 46.7     | 37.0      | 33.3      | 33.4         | 47.2               | 39.9     |
| Median Household Income (\$) ('79)                    | \$12,530 | \$13,854  | \$12,811  | \$13,169     | \$16,211           | \$11,296 |
| Percent of Persons<br>Below Poverty Level ('79)       | 20.2     | 20.0      | 22.9      | 20.6         | 18.6               | 27.5     |
| Population (July '84) *                               | 570,719  | 7,164,742 | 763,570   | 1,646,713    | 622,823            | 426,090  |
| Percent Change '80-84                                 | 1.4      | 1.3       | -2.9      | -2.5         | -2.4               | 0.3      |

Table 2 (cont'd). Population, Race, Ethnicity, Age, Household Composition, Income;  
Boston and Selected Large Cities, 4/01/80; Except Where Noted.

|                                                       | Chicago   | Detroit   | Minneapolis | Dallas   | Houston   | San<br>Antonio |
|-------------------------------------------------------|-----------|-----------|-------------|----------|-----------|----------------|
| Land Area (sq.mi.) ('80)                              | 228.1     | 135.6     | 55.1        | 330.0    | 556.4     | 262.7          |
| Population ('80)                                      | 3,005,072 | 1,203,339 | 370,951     | 904,078  | 1,595,138 | 785,880        |
| Percent Change '70-80                                 | -10.8     | -20.5     | -14.6       | 7.1      | 29.3      | 20.1           |
| Population per Square Mile                            | 13,174    | 8,874     | 6,732       | 2,715    | 2,867     | 2,992          |
| Race (percent of total)                               |           |           |             |          |           |                |
| White                                                 | 50.3      | 34.95     | 87.7        | 61.8     | 61.53     | 79.11          |
| Black                                                 | 39.8      | 63.03     | 7.7         | 29.3     | 27.56     | 7.33           |
| Asian & Pacific Islander                              | 2.5       | 0.63      | 1.4         | 1.0      | 2.22      | 0.74           |
| Spanish Origin                                        | 14.1      | 2.37      | 1.3         | 12.2     | 17.6      | 53.68          |
| Age (percent)                                         |           |           |             |          |           |                |
| Under 5 Years                                         | 7.7       | 7.9       | 6.0         | 7.4      | 7.9       | 8.6            |
| 5 to 17 years                                         | 20.7      | 22.4      | 13.9        | 19.5     | 20.4      | 23.6           |
| 18 to 64 Years                                        | 60.2      | 58.0      | 64.7        | 63.6     | 64.8      | 58.3           |
| 65 Years and Over                                     | 11.4      | 11.7      | 15.4        | 9.5      | 6.9       | 9.5            |
| Median Age (years)                                    | 29.4      | 28.7      | 29.8        | 28.7     | 27.6      | 27.2           |
| Persons Born in State Where<br>Now Residing (percent) | 59.2      | 58.9      | 65.8        | 65.6     | 60.1      | 71.7           |
| Households                                            | 1,093,409 | 433,488   | 161,858     | 355,073  | 602,696   | 258,984        |
| Persons per Household                                 | 2.71      | 2.73      | 2.19        | 2.51     | 2.62      | 2.97           |
| Family Households (percent)                           | 64.6      | 66.74     | 51.2        | 62.9     | 65.13     | 74.71          |
| Nonfamily Households (percent)                        | 35.4      | 33.26     | 48.8        | 37.1     | 48.48     | 25.29          |
| Median Household Income (\$ ('79)                     | \$15,301  | \$13,981  | \$14,351    | \$16,227 | \$18,474  | \$13,775       |
| Percent of Persons<br>Below Poverty Level ('79)       | 20.3      | 21.9      | 13.5        | 14.2     | 12.7      | 20.9           |
| Population (July '84) *                               | 2,992,472 | 1,088,973 | 358,335     | 974,234  | 1,705,697 | 842,779        |
|                                                       |           |           | -3.4        | 7.8      | 6.9       | 7.2            |

Table 2 (cont'd). Population, Race, Ethnicity, Age, Household Composition, Income; Boston and Selected Large Cities, 4/01/80; Except Where Noted.

|                                                    | Denver   | Phoenix  | Los Angeles | San Diego | San Francisco | Seattle  |
|----------------------------------------------------|----------|----------|-------------|-----------|---------------|----------|
| Land Area (sq.mi.) ('80)                           | 110.6    | 324.0    | 464.7       | 320.0     | 46.4          | 144.6    |
| Population ('80)                                   | 492,365  | 789,704  | 2,966,850   | 875,538   | 678,914       | 493,846  |
| Percent Change '70-80                              | -4.3     | 35.2     | 5.5         | 25.5      | -5.1          | -7.0     |
| Population per Square Mile                         | 4,452    | 2,437    | 6,384       | 2,736     | 14,633        | 3,415    |
| Race (percent of total)                            |          |          |             |           |               |          |
| White                                              | 76.3     | 85.28    | 62.1        | 77.01     | 59.2          | 40.0     |
| Black                                              | 12.0     | 4.78     | 17.0        | 8.85      | 12.7          | 9.4      |
| Asian & Pacific Islander                           | 1.8      | 1.07     | 7.0         | 7.04      | 22.0          | 7.9      |
| Spanish Origin                                     | 18.7     | 14.8     | 27.5        | 14.84     | 12.4          | 2.6      |
| Age (percent)                                      |          |          |             |           |               |          |
| Under 5 Years                                      | 6.7      | 7.8      | 7.1         | 6.4       | 4.6           | 4.9      |
| 5 to 17 Years                                      | 15.8     | 21.2     | 18.1        | 17.8      | 12.5          | 12.7     |
| 18 to 64 Years                                     | 64.9     | 61.7     | 64.2        | 66.1      | 67.5          | 67.0     |
| 65 Years and Over                                  | 12.6     | 9.3      | 10.6        | 9.7       | 15.4          | 15.4     |
| Median Age (years)                                 | 30.3     | 28.9     | 30.3        | 28.4      | 34.1          | 32.4     |
| Persons Born in State Where Now Residing (percent) | 42.2     | 31.2     | 35.9        | 33.0      | 36.7          | 44.2     |
| Households                                         |          |          |             |           |               |          |
| Persons per Household                              | 211,566  | 284,780  | 1,135,230   | 321,060   | 298,956       | 219,469  |
| Family Households (percent)                        | 2.27     | 2.74     | 2.55        | 2.53      | 2.19          | 2.15     |
| Nonfamily Households (percent)                     | 55.7     | 71.0     | 61.1        | 62.74     | 47.0          | 52.0     |
|                                                    | 44.3     | 29.0     | 38.9        | 37.26     | 53.0          | 48.0     |
| Median Household Income (\$) ('79)                 | \$15,506 | \$17,419 | \$15,735    | \$16,408  | \$15,866      | \$16,254 |
| Percent of Persons Below Poverty Level ('79)       | 13.7     | 11.1     | 16.4        | 12.4      | 13.7          | 11.2     |
| Population (July '84)*                             | 504,588  | 853,266  | 3,096,721   | 960,452   | 712,753       | 488,474  |
| Percent Change '80-84                              | 2.5      | 8.0      | 4.4         | 9.7       | 5.0           | -1.1     |



\* Boston's 1985 population is 601,095 a 6.8 percent increase from 1980 (BRA/PFD, Household survey conducted by the Center for Survey Research, U.Mass-Boston).

Source: U.S. Bureau of the Census, County and City Data Book, 1983;  
State and Metropolitan Area Data Book, 1986.

Table 3. Housing and Jobs-Population Ratio, Boston and Selected Large Cities,  
4/01/80; Except where Noted.

|                                                              | Boston  | New York  | Baltimore | Philadelphia | Washington<br>D.C. |
|--------------------------------------------------------------|---------|-----------|-----------|--------------|--------------------|
| Housing                                                      |         |           |           |              |                    |
| Total Units                                                  | 241,444 | 2,940,837 | 302,459   | 685,131      | 276,792            |
| Percent Change '70-80                                        | 3.9     | 0.8       | -0.9      | 1.7          | -0.5               |
| Vacant units (percent)                                       | 9.5     | 5.2       | 7.0       | 9.5          | 8.5                |
| Units in Structure, Percent with:                            |         |           |           |              |                    |
| One Unit                                                     | 15.6    | 11.7      | 62.0      | 65.3         | 35.2               |
| 5 or More Units                                              | 42.8    | 64.5      | 20.7      | 18.0         | 52.7               |
| Year Structure Built                                         |         |           |           |              |                    |
| Percent Built:                                               |         |           |           |              |                    |
| '70 to March '80                                             | 7.2     | 7.3       | 5.8       | 5.5          | 7.0                |
| '60 to '69                                                   | 9.0     | 13.7      | 10.0      | 10.1         | 15.2               |
| '39 or Earlier                                               | 63.0    | 49.4      | 50.3      | 58.4         | 39.1               |
| Renter-Occupied Units                                        | 72.8    | 76.6      | 52.8      | 39.0         | 64.5               |
| Percent of All Occupied Units                                |         |           |           |              |                    |
| Employment/Residents Ratio ('80)                             | 1.9     | 1.2       | 1.5       | 1.3          | 2.3                |
| Persons Working Outside City of<br>Residence (percent) ('80) | 25.2    | 6.2       | 24.0      | 14.3         | 19.1               |

Table 3(cont'd). Housing and Jobs-Population Ratio, Boston and Selected Large Cities,  
4/01/80; Except Where Noted.

|                                                           | Chicago   | Detroit | Minneapolis | Dallas  | Houston | San Antonio |
|-----------------------------------------------------------|-----------|---------|-------------|---------|---------|-------------|
| Housing                                                   |           |         |             |         |         |             |
| Total Units                                               | 1,173,758 | 471,412 | 168,828     | 390,426 | 678,324 | 277,803     |
| Percent Change '70-80                                     | -2.9      | -11.1   | 1.0         | 28.7    | 58.5    | 36.7        |
| Vacant units (percent)                                    | 6.8       | 8.0     | 4.1         | 9.0     | 11.1    | 6.7         |
| Units in Structure, Percent with:                         |           |         |             |         |         |             |
| One Unit                                                  | 24.6      | 59.7    | 46.9        | 53.5    | 53.0    | 69.1        |
| 5 or More Units                                           | 41.7      | 18.7    | 34.2        | 37.6    | 39.8    | 20.8        |
| Year Structure Built                                      |           |         |             |         |         |             |
| Percent Built:                                            |           |         |             |         |         |             |
| '70 to March '80                                          | 5.9       | 3.2     | 9.2         | 28.1    | 36.5    | 25.9        |
| '60 to '69                                                | 11.4      | 5.4     | 11.5        | 26.5    | 25.6    | 23.9        |
| '39 or Earlier                                            | 51.8      | 45.6    | 56.9        | 9.8     | 8.4     | 14.1        |
| Renter-Occupied Units                                     |           |         |             |         |         |             |
| Percent of All Occupied Unit                              | 61.1      | 42.12   | 50.8        | 51.4    | 52.23   | 40.45       |
| Employment/Residents Ratio ('80)                          | 1.2       | 1.3     | 1.5         | 1.5     | 1.3     | 1.2         |
| Persons Working Outside City of Residence (percent) ('80) | 19.0      | 35.2    | 35.4        | 17.6    | 10.7    | 8.5         |



Table 3 (cont'd). Housing and Jobs-Population Ratio, Boston and Selected Large Cities,  
4/01/80; Except Where Noted.

|                                                           |                               | Denver  | Phoenix | Los Angeles | San Diego | San Francisco | Seattle |
|-----------------------------------------------------------|-------------------------------|---------|---------|-------------|-----------|---------------|---------|
| Housing                                                   | Total Units                   | 227,879 | 308,302 | 1,188,917   | 341,928   | 316,608       | 229,927 |
|                                                           | Percent Change '70-80         | 17.6    | 57.3    | 10.7        | 41.7      | 2.0           | 3.7     |
|                                                           | Vacant units (percent)        | 7.1     | 7.3     | 4.5         | 6.0       | 5.5           | 4.5     |
| Units in Structure, Percent with:                         |                               |         |         |             |           |               |         |
|                                                           | One Unit                      | 54.4    | 66.2    | 48.2        | 59.7      | 34.9          | 57.2    |
|                                                           | 5 or More Units               | 36.6    | 22.4    | 40.9        | 29.2      | 43.0          | 33.3    |
| Year Structure Built                                      |                               |         |         |             |           |               |         |
|                                                           | Percent Built:                |         |         |             |           |               |         |
|                                                           | '70 to March '80              | 19.7    | 39.7    | 13.6        | 32.8      | 6.6           | 10.0    |
|                                                           | '60 to '69                    | 16.8    | 24.5    | 20.5        | 22.6      | 9.3           | 14.6    |
|                                                           | '39 or Earlier                | 29.4    | 4.8     | 22.7        | 13.0      | 51.7          | 40.3    |
| Renter-Occupied Units                                     |                               |         |         |             |           |               |         |
|                                                           | Percent of All Occupied Units | 49.8    | 35.26   | 59.7        | 50.80     | 66.3          | 49.0    |
| Employment/Residents Ratio ('80)                          |                               | 1.6     | 1.11    | 1.2         | 1.11      | 1.6           | 1.6     |
| Persons Working Outside City of Residence (percent) ('80) |                               | 25.1    | 17.5    | 28.4        | 17.5      | 14.4          | 16.3    |

Source: U.S. Bureau of the Census, County and City Data Book, 1983;  
State and Metropolitan Area Data Book, 1986.

### III. Industrial Structure:

#### 1. Introduction:

When comparing Boston's economy to that of the 34 other largest metropolitan areas in the United States, the most striking distinction to be explained is Boston's low unemployment rate, particularly in the recent period. Boston's unemployment rate was 4.1 percent in 1984, and went down to 3.4 percent in 1985, and 3.3 percent in 1986. Rates for March 1986 and March 1987 were 3.5 percent and 3.6 percent respectively (see Table 4).

The other metropolitan areas in this study with low unemployment rates are Washington,DC, San Francisco, Kansas City, Nashville, Atlanta, Dallas, Fort Worth and Minneapolis-St.Paul (See table 4). The metropolitan areas with high unemployment rates are El Paso, New Orleans, Pittsburgh, Houston, Detroit and Cleveland. Some of these are Sunbelt cities while others are old industrial centers.

A low unemployment rate can be due either to sustained job growth and to the industrial mix of a city's economic base, or to a stable labor pool itself a function of the size and composition of the work force, or to both. In this comparison, it seems that both job growth and a stable labor pool are at play since, as we will see later, some of the metro areas with high unemployment rates also experienced significant job growth in major industrial sectors over the time period reviewed.

Table 4. Unemployment Rates \* in the Nation's Largest Metropolitan Areas, by Census Region  
(in percent)

| Metropolitan Area    | Annual Average |      |      | March | March |
|----------------------|----------------|------|------|-------|-------|
|                      | 1984           | 1985 | 1986 | 1986  | 1987  |
| Boston               | 4.1            | 3.4  | 3.3  | 3.5   | 3.6   |
| New York             | 8.1            | 7.4  | 7.4  | 7.3   | 5.4   |
| Philadelphia         | 6.8            | 5.9  | 5.2  | 5.6   | 4.7   |
| Baltimore            | 6.2            | 5.3  | 5.2  | 5.8   | 5.4   |
| Washington, D.C.     | 4.2            | 3.9  | 3.5  | 3.6   | 3.7   |
| Buffalo              | 8.7            | 7.3  | 7.2  | 8.8   | 6.4   |
| Pittsburgh           | 11.3           | 9.4  | 8.0  | 9.1   | 7.7   |
| Cleveland            | 8.9            | 8.3  | 7.5  | 7.1   | 6.9   |
| Cincinnati           | 8.3            | 7.2  | 6.5  | 6.3   | 7.1   |
| Columbus             | 7.8            | 6.7  | 6.1  | 5.8   | 5.8   |
| Detroit              | 10.8           | 9.1  | 8.2  | 8.6   | 8.0   |
| Milwaukee            | 6.6            | 6.4  | 6.1  | 6.9   | 6.0   |
| Chicago              | 8.4            | 8.3  | 7.4  | 8.0   | 7.2   |
| Indianapolis         | 7.1            | 6.1  | 5.1  | 5.8   | 5.1   |
| Minn.-St. Paul       | 4.7            | 4.5  | 4.2  | 5.1   | 4.4   |
| St. Louis            | 8.1            | 7.4  | 7.0  | 7.3   | 7.1   |
| Kansas City          | 5.4            | 4.6  | 4.6  | 5.2   | 5.2   |
| Memphis              | 7.3            | 6.6  | 6.8  | 7.2   | 6.2   |
| Nashville            | 5.5            | 4.7  | 4.9  | 5.0   | 4.8   |
| Atlanta              | 4.8            | 5.0  | 4.6  | 4.7   | 4.7   |
| Jacksonville         | 5.7            | 5.2  | 5.4  | 5.3   | 5.4   |
| New Orleans          | 9.0            | 11.0 | 10.9 | 10.1  | 10.8  |
| Oklahoma City        | 5.6            | 5.8  | 6.7  | 6.2   | 6.9   |
| Dallas               | 3.6            | 4.7  | 5.7  | 5.4   | 5.8   |
| Fort Worth-Arlington | 4.0            | 5.0  | 6.5  | 5.9   | 6.3   |
| El Paso              | 9.7            | 10.8 | 11.5 | 11.3  | 10.2  |
| Houston              | 6.7            | 7.8  | 10.3 | 9.3   | 9.0   |
| San Antonio          | 4.9            | 6.0  | 7.3  | 6.8   | 7.6   |
| Denver               | 4.8            | 5.0  | 6.6  | 6.4   | 8.8   |
| Phoenix              | 3.8            | 5.1  | 5.6  | 5.5   | 6.3   |
| San Diego            | 6.0            | 5.3  | 5.0  | 5.2   | 4.5   |
| Los Angeles          | 7.9            | 7.0  | 6.7  | 6.0   | 6.2   |
| San Jose             | 5.3            | 5.8  | 5.8  | 6.3   | 5.0   |
| San Francisco        | 5.3            | 4.9  | 4.5  | 4.7   | 3.9   |
| Seattle              | 7.9            | 6.6  | 6.5  | 6.8   | 7.1   |
| United States        | 7.5            | 7.2  | 6.9  | 7.5   | 6.9   |

Source: U.S. Department of Labor, Bureau of Labor Statistics, February, 1987.

\* Monthly rates are not seasonally adjusted.



2. The industrial mix as reflected by location quotients for metropolitan areas and counties: 1969 and 1984

One common indicator of the industrial mix of a city or region, and of the degree of specialization of city's economy as compared to the industrial mix of the US economy, is its location quotient for each industrial sector. A location quotient of 1 for a given industrial sector indicates that the industry's weight in the local economy is similar to that same industry's weight in the national economy. A location quotient below 1 means that the industry is "under-represented" in the region, whereas a quotient above 1 indicates "over-representation." While the absolute level of location quotients may be somewhat problematic to interpret, looking at their change over time provides an indication of change in the economic base of an area. A location quotient is computed as follows:

$$LQ = ( (E_{ij}/E_j) / (E_i/E) )$$

where  $E_{ij}$  = employment in industry i in city j  
 $E_j$  = total employment in city j  
 $E_i$  = total US employment in industry i  
 $E$  = total US employment

Thus a location quotient for an industry in an area is a function of that industry's growth in the area and in the US, and of the growth of total employment in the area and in the nation. The location quotients of all industrial sectors of metropolitan areas and central city counties for the reviewed cities are noted in Tables 5 and 6.

A companion figure is reported here. The net export (+) or import (-) role of an industrial sector in a local economy.

It provides an indication of how different from 1 the location quotient of a given sector is. This figure highlights sectors which are likely to be export sectors (+) on the assumption that if an industry's weight in a local economy is greater than that same industry's weight in the US economy, then this industry is an export sector for the region. The net export/import role is computed as follows:

$$( 1 - (1/LQ) )$$

The reasoning behind the use of the location quotient and of the figure for the export/import role is that regions consume all the local production from an industry and export anything left over. This reasoning does not take account of the fact that a region might export most of its output from a given industry and import a similar but not identical product generated in a different region.

#### 2.a. Location quotient for Boston:

In 1969, the location quotients for Wholesale Trade, Retail Trade, F.I.R.E., Transportation and Public Utilities and Construction were above or around 1 for the Boston metropolitan area.

By 1984, all of the above sectors showed a decline in their location quotient. Such decline could be due to reduced employment in these sectors. It turns out that while these sectors did not experience a drastic employment increase over the period, they did experience a sustained, moderate, growth (See

later section). What lies behind this decline in the location quotient is that the weight of these sectors in the US economy grew comparatively more than it did in Boston. This occurred because the share that these sectors held in US employment grew faster than, without fully catching up with, the share they held in the Boston area. In 1984, the US economy "resembled" Boston's more than it did in 1969 (See table below).

One exception to the trend of reduced specialization of the Boston metropolitan area economy is the increase in the location quotient for manufacturing. Most likely, this increase is due to the drastic reduction in the relative weight of manufacturing in the US economy and to some increase in manufacturing employment in the Boston metropolitan area.

Location quotients for Suffolk county present an even greater specialization in the service-producing sectors listed above and no specialization in manufacturing (See a later section of this report for a characterization of employment patterns of counties versus metropolitan areas). The location quotient for Transportation and Public Utilities is significantly higher for Suffolk County than it is for the metro area because the city's airport is within the county boundary, a rare occurrence for a large city. While the county location quotients also decline, that for services shows an increase between 1969 and 1984. Suffolk County continues to have more employment growth in services than the metro area and than the US economy as a whole.



The F.I.R.E. location quotient for the county decreases noticeably between 1969 and 1984. Suffolk County lost some of its considerable specialization in F.I.R.E. employment compared to the US economy. Again, this comparative loss of specialization is due not to a decline in F.I.R.E. activity in Suffolk County, but to a sharp increase in the relative weight of F.I.R.E. employment in US total employment. In fact, Suffolk County still has a F.I.R.E. location quotient which is substantially above 1.

LOCATION QUOTIENTS FOR BOSTON  
SELECTED INDUSTRIAL SECTORS

|                       | 1969 | 1984 |
|-----------------------|------|------|
| <u>Metro Area</u>     |      |      |
| Manufacturing         | 1.00 | 1.15 |
| Wholesale trade       | 1.25 | 1.11 |
| Retail trade          | 1.11 | 0.98 |
| F.I.R.E.              | 1.26 | 1.02 |
| Services              | 1.30 | 1.28 |
| Transportation        | 0.94 | 0.88 |
| Construction          | 0.99 | 0.78 |
| <u>Suffolk County</u> |      |      |
| Manufacturing         | 0.55 | 0.49 |
| Wholesale trade       | 1.74 | 1.02 |
| Retail trade          | 0.98 | 0.73 |
| F.I.R.E.              | 2.37 | 1.90 |
| Services              | 1.39 | 1.53 |
| Transportation        | 1.37 | 1.36 |
| Construction          | 0.78 | 0.46 |

2.b. Location quotients for the other 34 cities:

The following tables (Tables ) also report location quotients and import/export role figures for metropolitan areas and central city counties for all cities in our study. While the location quotient is not precise enough an instrument to accurately match all cities with a similar economic base, it

still allows us to compare Boston's economy to that of New York City, that of San Francisco, two cities with significant activity in service-producing sectors, and that of Houston, a high-growth sunbelt city.

#### NEW YORK CITY LOCATION QUOTIENTS

| <u>Metro area</u> | 1969 | 1984 |
|-------------------|------|------|
| Wholesale trade   | 1.65 | 1.37 |
| Retail trade      | 0.84 | 0.72 |
| F.I.R.E.          | 2.16 | 1.85 |
| Services          | 1.32 | 1.35 |
| Transportation    | 1.36 | 1.33 |

The New York City metropolitan area shows a similar decline in specialization except for services employment which shows a slight increase. Figures for the 5 central city counties can be found in Table 6X. They are not very different from those for the metropolitan area because those 5 counties encompass a good part of the New York City metro area. The location quotient for Transportation is also higher for counties because of the presence of airports.

#### SAN FRANCISCO LOCATION QUOTIENTS

| <u>Metro Area</u> | 1969 | 1984 |
|-------------------|------|------|
| Wholesale trade   | 1.55 | 1.20 |
| Retail trade      | 0.91 | 0.92 |
| F.I.R.E.          | 2.02 | 1.86 |
| Services          | 1.25 | 1.34 |
| Transportation    | 2.06 | 1.65 |

The San Francisco metropolitan area is specialized in service-producing industries as well. It shares the same trend as Boston but shows an increase in the location quotient

particularly for Services and a bit for Retail Trade. These are two sectors for which the location quotient was lower for San Francisco than for Boston in 1969. While Boston's economy seems to have become relatively less specialized in these two sectors, that of San Francisco continues to be specialized increasingly in services, and to have a Retail Trade sector whose relative weight approximates the US average. The location quotients for San Francisco County move in the same direction as that for its metropolitan area.

#### HOUSTON LOCATION QUOTIENTS

| <u>Metro Area</u> | 1969 | 1984 |
|-------------------|------|------|
| Mining            | 4.35 | 5.84 |
| Wholesale trade   | 1.77 | 1.38 |
| Retail trade      | 1.05 | 1.01 |
| F.I.R.E.          | 1.17 | 1.20 |
| Services          | 1.19 | 1.04 |
| Transportation    | 1.38 | 1.29 |
| Construction      | 1.71 | 1.69 |

Houston, a fast growing sun-belt city between 1969 and 1984, had location quotients which clearly showed a different specialization from the cities above. Mining activity, the oil industry, was heavily concentrated in this metro area and its central city county, Harris County. The Houston metro area also displayed specialization in wholesale trade, transportation and construction, industries whose activity probably accompanied that of the mining sector, and a slight specialization in the F.I.R.E. and services sector. Harris County had very similar location quotients. In the metro area and the county, the location



Table 5A : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Atlanta Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.28                         | -2.57                              | 0.18                         | -4.54                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.05                         | 0.05                               |
| Ag. Serv., For., Fish., and Other     | 0.48                         | -1.08                              | 0.00                         | ERR                                |
| Mining                                | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Construction                          | 1.20                         | 0.17                               | 1.22                         | 0.18                               |
| Manufacturing                         | 0.87                         | -0.15                              | 0.75                         | -0.33                              |
| Transportation and Public Utilities   | 1.45                         | 0.31                               | 1.56                         | 0.36                               |
| Wholesale Trade                       | 1.89                         | 0.47                               | 1.94                         | 0.48                               |
| Retail Trade                          | 1.00                         | 0.00                               | 1.04                         | 0.04                               |
| Finance, Insurance, and Real Estate   | 1.29                         | 0.22                               | 1.16                         | 0.14                               |
| Services                              | 1.06                         | 0.06                               | 0.97                         | -0.03                              |
| Government and Government Enterprises | 0.82                         | -0.23                              | 0.89                         | -0.12                              |
| Federal, Civilian                     | 1.06                         | 0.06                               | 1.05                         | 0.04                               |
| Military                              | 0.50                         | -0.98                              | 0.78                         | -0.28                              |
| State and Local                       | 0.85                         | -0.18                              | 0.88                         | -0.13                              |

Table 5B : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Baltimore Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.18                         | -4.49                              | 0.22                         | -3.51                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 0.98                         | -0.02                              | 0.97                         | -0.04                              |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Mining                                | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Construction                          | 1.02                         | 0.02                               | 1.11                         | 0.10                               |
| Manufacturing                         | 0.93                         | -0.07                              | 0.73                         | -0.38                              |
| Transportation and Public Utilities   | 1.16                         | 0.14                               | 1.11                         | 0.10                               |
| Wholesale Trade                       | 1.02                         | 0.02                               | 1.00                         | 0.00                               |
| Retail Trade                          | 1.01                         | 0.01                               | 1.02                         | 0.02                               |
| Finance, Insurance, and Real Estate   | 1.03                         | 0.03                               | 1.02                         | 0.02                               |
| Services                              | 0.99                         | -0.01                              | 1.07                         | 0.07                               |
| Government and Government Enterprises | 1.30                         | 0.23                               | 1.33                         | 0.25                               |
| Federal, Civilian                     | 1.97                         | 0.49                               | 2.56                         | 0.61                               |
| Military                              | 1.36                         | 0.26                               | 1.20                         | 0.17                               |
| State and Local                       | 1.08                         | 0.07                               | 1.08                         | 0.07                               |

Table 5C : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Boston  
Lawrence, Salem, Lowell, Brockton Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.07                         | -12.92                             | 0.07                         | -13.62                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.11                         | 0.10                               | 1.08                         | 0.08                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Mining                                | 0.05                         | -20.11                             | 0.07                         | -13.48                             |
| Construction                          | 0.99                         | -0.01                              | 0.78                         | -0.29                              |
| Manufacturing                         | 1.00                         | 0.00                               | 1.15                         | 0.13                               |
| Transportation and Public Utilities   | 0.94                         | -0.06                              | 0.88                         | -0.14                              |
| Wholesale Trade                       | 1.25                         | 0.20                               | 1.11                         | 0.10                               |
| Retail Trade                          | 1.11                         | 0.10                               | 0.98                         | -0.02                              |
| Finance, Insurance, and Real Estate   | 1.26                         | 0.21                               | 1.02                         | 0.01                               |
| Services                              | 1.30                         | 0.23                               | 1.28                         | 0.22                               |
| Government and Government Enterprises | 0.79                         | -0.26                              | 0.76                         | -0.32                              |
| Federal, Civilian                     | 0.92                         | -0.09                              | 0.78                         | -0.28                              |
| Military                              | 0.55                         | -0.82                              | 0.58                         | -0.74                              |
| State and Local                       | 0.84                         | -0.19                              | 0.79                         | -0.26                              |



Table 5D : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Buffalo Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.13                         | -6.69                              | 0.23                         | -3.27                              |
| Non-farm                              | 1.05                         | 0.04                               | 1.03                         | 0.02                               |
| Private                               | 1.08                         | 0.07                               | 1.04                         | 0.03                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.44                         | -1.27                              |
| Mining                                | 0.00                         | ERR                                | 0.21                         | -3.66                              |
| Construction                          | 0.87                         | -0.15                              | 0.73                         | -0.36                              |
| Manufacturing                         | 1.28                         | 0.22                               | 1.06                         | 0.06                               |
| Transportation and Public Utilities   | 1.25                         | 0.20                               | 1.01                         | 0.01                               |
| Wholesale Trade                       | 1.14                         | 0.12                               | 1.11                         | 0.10                               |
| Retail Trade                          | 1.12                         | 0.11                               | 1.10                         | 0.09                               |
| Finance, Insurance, and Real Estate   | 0.90                         | -0.11                              | 0.94                         | -0.06                              |
| Services                              | 0.90                         | -0.11                              | 1.11                         | 0.10                               |
| Government and Government Enterprises | 0.89                         | -0.12                              | 0.98                         | -0.02                              |
| Federal, Civilian                     | 0.54                         | -0.84                              | 0.72                         | -0.38                              |
| Military                              | 0.33                         | -2.01                              | 0.24                         | -3.09                              |
| State and Local                       | 1.19                         | 0.16                               | 1.18                         | 0.15                               |

Table 5E : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Chicago Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.04                         | -26.05                             | 0.04                         | -25.06                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.14                         | 0.12                               | 1.09                         | 0.09                               |
| Ag.Serv., For., Fish., and Other      | 0.35                         | -1.83                              | 0.40                         | -1.52                              |
| Mining                                | 0.22                         | -3.45                              | 0.15                         | -5.54                              |
| Construction                          | 0.94                         | -0.07                              | 0.74                         | -0.36                              |
| Manufacturing                         | 1.27                         | 0.21                               | 1.14                         | 0.12                               |
| Transportation and Public Utilities   | 1.23                         | 0.19                               | 1.18                         | 0.15                               |
| Wholesale Trade                       | 1.64                         | 0.39                               | 1.52                         | 0.34                               |
| Retail Trade                          | 1.01                         | 0.01                               | 0.96                         | -0.04                              |
| Finance, Insurance, and Real Estate   | 1.28                         | 0.22                               | 1.27                         | 0.22                               |
| Services                              | 1.02                         | 0.02                               | 1.14                         | 0.12                               |
| Government and Government Enterprises | 0.65                         | -0.54                              | 0.72                         | -0.39                              |
| Federal, Civilian                     | 0.67                         | -0.50                              | 0.71                         | -0.42                              |
| Military                              | 0.25                         | -2.99                              | 0.24                         | -3.24                              |
| State and Local                       | 0.78                         | -0.28                              | 0.82                         | -0.22                              |

Table 5F : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Cincinnati Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.30                         | -2.37                              | 0.33                         | -2.01                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.02                         | 0.02                               |
| Private                               | 1.12                         | 0.10                               | 1.08                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.44                         | -1.27                              | 0.48                         | -1.06                              |
| Mining                                | 0.09                         | -9.81                              | 0.11                         | -7.80                              |
| Construction                          | 1.06                         | 0.05                               | 0.90                         | -0.11                              |
| Manufacturing                         | 1.27                         | 0.21                               | 1.24                         | 0.19                               |
| Transportation and Public Utilities   | 1.17                         | 0.15                               | 1.01                         | 0.01                               |
| Wholesale Trade                       | 1.23                         | 0.19                               | 1.15                         | 0.13                               |
| Retail Trade                          | 1.03                         | 0.03                               | 1.11                         | 0.10                               |
| Finance, Insurance, and Real Estate   | 1.10                         | 0.09                               | 0.97                         | -0.03                              |
| Services                              | 1.03                         | 0.03                               | 1.06                         | 0.06                               |
| Government and Government Enterprises | 0.69                         | -0.44                              | 0.75                         | -0.33                              |
| Federal, Civilian                     | 0.78                         | -0.27                              | 0.72                         | -0.38                              |
| Military                              | 0.30                         | -2.37                              | 0.31                         | -2.24                              |
| State and Local                       | 0.80                         | -0.25                              | 0.85                         | -0.17                              |



Table 5G : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Cleveland Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.10                         | -9.48                              | 0.13                         | -6.64                              |
| Non-farm                              | 1.05                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.14                         | 0.12                               | 1.08                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.44                         | -1.27                              | 0.52                         | -0.92                              |
| Mining                                | 0.24                         | -3.10                              | 0.21                         | -3.76                              |
| Construction                          | 1.01                         | 0.01                               | 0.78                         | -0.29                              |
| Manufacturing                         | 1.42                         | 0.29                               | 1.33                         | 0.25                               |
| Transportation and Public Utilities   | 1.08                         | 0.08                               | 0.96                         | -0.04                              |
| Wholesale Trade                       | 1.35                         | 0.26                               | 1.31                         | 0.24                               |
| Retail Trade                          | 1.00                         | 0.00                               | 1.00                         | 0.00                               |
| Finance, Insurance, and Real Estate   | 1.03                         | 0.02                               | 0.99                         | -0.01                              |
| Services                              | 0.99                         | -0.01                              | 1.08                         | 0.08                               |
| Government and Government Enterprises | 0.65                         | -0.53                              | 0.77                         | -0.30                              |
| Federal, Civilian                     | 0.69                         | -0.45                              | 0.80                         | -0.25                              |
| Military                              | 0.29                         | -2.49                              | 0.26                         | -2.85                              |
| State and Local                       | 0.76                         | -0.31                              | 0.87                         | -0.15                              |

Table 5H: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Columbus Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.54                         | -0.85                              | 0.54                         | -0.84                              |
| Non-farm                              | 1.02                         | 0.02                               | 1.02                         | 0.01                               |
| Private                               | 1.03                         | 0.03                               | 1.01                         | 0.01                               |
| Ag.Serv., For., Fish., and Other      | 0.62                         | -0.60                              | 0.78                         | -0.28                              |
| Mining                                | 0.40                         | -1.48                              | 0.41                         | -1.44                              |
| Construction                          | 1.14                         | 0.12                               | 0.83                         | -0.21                              |
| Manufacturing                         | 1.03                         | 0.03                               | 0.93                         | -0.08                              |
| Transportation and Public Utilities   | 0.97                         | -0.03                              | 0.90                         | -0.11                              |
| Wholesale Trade                       | 0.91                         | -0.09                              | 0.93                         | -0.07                              |
| Retail Trade                          | 1.10                         | 0.09                               | 1.11                         | 0.10                               |
| Finance, Insurance, and Real Estate   | 1.28                         | 0.22                               | 1.32                         | 0.24                               |
| Services                              | 0.94                         | -0.06                              | 1.01                         | 0.01                               |
| Government and Government Enterprises | 1.01                         | 0.01                               | 1.05                         | 0.05                               |
| Federal, Civilian                     | 0.98                         | -0.02                              | 0.86                         | -0.17                              |
| Military                              | 0.62                         | -0.62                              | 0.27                         | -2.74                              |
| State and Local                       | 1.15                         | 0.13                               | 1.25                         | 0.20                               |

Table 5I : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Dallas Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.31                         | -2.21                              | 0.20                         | -4.06                              |
| Non-farm                              | 1.04                         | 0.03                               | 1.03                         | 0.03                               |
| Private                               | 1.14                         | 0.12                               | 1.11                         | 0.10                               |
| Ag.Serv., For., Fish., and Other      | 0.48                         | -1.10                              | 0.50                         | -0.98                              |
| Mining                                | 1.53                         | 0.35                               | 2.33                         | 0.57                               |
| Construction                          | 1.25                         | 0.20                               | 1.35                         | 0.26                               |
| Manufacturing                         | 0.95                         | -0.05                              | 0.92                         | -0.08                              |
| Transportation and Public Utilities   | 1.25                         | 0.20                               | 1.20                         | 0.16                               |
| Wholesale Trade                       | 1.89                         | 0.47                               | 1.61                         | 0.38                               |
| Retail Trade                          | 1.04                         | 0.04                               | 1.02                         | 0.02                               |
| Finance, Insurance, and Real Estate   | 1.58                         | 0.37                               | 1.46                         | 0.32                               |
| Services                              | 1.08                         | 0.07                               | 0.99                         | -0.01                              |
| Government and Government Enterprises | 0.59                         | -0.69                              | 0.60                         | -0.66                              |
| Federal, Civilian                     | 0.53                         | -0.88                              | 0.64                         | -0.56                              |
| Military                              | 0.30                         | -2.35                              | 0.28                         | -2.52                              |
| State and Local                       | 0.71                         | -0.41                              | 0.66                         | -0.52                              |



Table 5J : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Denver Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.19                         | -4.18                              | 0.13                         | -6.45                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.03                         | 0.03                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 0.61                         | -0.64                              | 0.80                         | -0.25                              |
| Mining                                | 1.57                         | 0.36                               | 2.88                         | 0.65                               |
| Construction                          | 1.17                         | 0.14                               | 1.29                         | 0.22                               |
| Manufacturing                         | 0.63                         | -0.59                              | 0.61                         | -0.63                              |
| Transportation and Public Utilities   | 1.30                         | 0.23                               | 1.35                         | 0.26                               |
| Wholesale Trade                       | 1.57                         | 0.36                               | 1.27                         | 0.22                               |
| Retail Trade                          | 1.12                         | 0.11                               | 1.01                         | 0.01                               |
| Finance, Insurance, and Real Estate   | 1.41                         | 0.29                               | 1.45                         | 0.31                               |
| Services                              | 1.11                         | 0.10                               | 1.07                         | 0.06                               |
| Government and Government Enterprises | 1.07                         | 0.07                               | 0.87                         | -0.15                              |
| Federal, Civilian                     | 1.40                         | 0.29                               | 1.24                         | 0.19                               |
| Military                              | 1.08                         | 0.08                               | 0.79                         | -0.27                              |
| State and Local                       | 0.97                         | -0.03                              | 0.80                         | -0.25                              |

Table 5K : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Detroit Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.16                         | -5.36                              | 0.20                         | -4.05                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.12                         | 0.11                               | 1.08                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.40                         | -1.51                              | 0.47                         | -1.12                              |
| Mining                                | 0.00                         | ERR                                | 0.12                         | -7.39                              |
| Construction                          | 0.90                         | -0.11                              | 0.60                         | -0.66                              |
| Manufacturing                         | 1.50                         | 0.33                               | 1.45                         | 0.31                               |
| Transportation and Public Utilities   | 0.95                         | -0.05                              | 0.86                         | -0.16                              |
| Wholesale Trade                       | 1.09                         | 0.09                               | 1.00                         | 0.00                               |
| Retail Trade                          | 1.03                         | 0.03                               | 1.07                         | 0.07                               |
| Finance, Insurance, and Real Estate   | 1.02                         | 0.02                               | 0.92                         | -0.09                              |
| Services                              | 0.94                         | -0.07                              | 1.08                         | 0.07                               |
| Government and Government Enterprises | 0.70                         | -0.42                              | 0.77                         | -0.29                              |
| Federal, Civilian                     | 0.57                         | -0.75                              | 0.66                         | -0.52                              |
| Military                              | 0.36                         | -1.80                              | 0.27                         | -2.76                              |
| State and Local                       | 0.86                         | -0.16                              | 0.90                         | -0.11                              |

Table 51. : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, El Paso Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.28                         | -2.51                              | 0.15                         | -5.89                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 0.80                         | -0.24                              | 0.92                         | -0.09                              |
| Ag.Serv., For., Fish., and Other      | 0.27                         | -2.69                              | 0.41                         | -1.45                              |
| Mining                                | 0.17                         | -4.78                              | 0.35                         | -1.83                              |
| Construction                          | 0.88                         | -0.13                              | 1.02                         | 0.02                               |
| Manufacturing                         | 0.64                         | -0.57                              | 1.00                         | 0.00                               |
| Transportation and Public Utilities   | 1.08                         | 0.07                               | 1.05                         | 0.05                               |
| Wholesale Trade                       | 0.98                         | -0.02                              | 0.96                         | -0.04                              |
| Retail Trade                          | 0.96                         | -0.05                              | 0.99                         | -0.01                              |
| Finance, Insurance, and Real Estate   | 0.76                         | -0.32                              | 0.91                         | -0.09                              |
| Services                              | 0.80                         | -0.25                              | 0.81                         | -0.24                              |
| Government and Government Enterprises | 2.05                         | 0.51                               | 1.58                         | 0.37                               |
| Federal, Civilian                     | 1.87                         | 0.46                               | 1.60                         | 0.38                               |
| Military                              | 5.65                         | 0.82                               | 3.94                         | 0.75                               |
| State and Local                       | 0.89                         | -0.13                              | 1.09                         | 0.08                               |



Table 5M : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Fort Worth Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.38                         | -1.63                              | 0.29                         | -2.47                              |
| Non-farm                              | 1.03                         | 0.03                               | 1.02                         | 0.02                               |
| Private                               | 1.08                         | 0.07                               | 1.08                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.44                         | -1.27                              | 0.00                         | ERR                                |
| Mining                                | 1.23                         | 0.19                               | 1.72                         | 0.42                               |
| Construction                          | 1.04                         | 0.04                               | 1.38                         | 0.27                               |
| Manufacturing                         | 1.22                         | 0.18                               | 1.14                         | 0.13                               |
| Transportation and Public Utilities   | 0.94                         | -0.06                              | 1.03                         | 0.03                               |
| Wholesale Trade                       | 1.11                         | 0.10                               | 1.05                         | 0.05                               |
| Retail Trade                          | 1.09                         | 0.08                               | 1.21                         | 0.17                               |
| Finance, Insurance, and Real Estate   | 0.92                         | -0.08                              | 0.97                         | -0.03                              |
| Services                              | 1.01                         | 0.01                               | 0.92                         | -0.08                              |
| Government and Government Enterprises | 0.82                         | -0.22                              | 0.73                         | -0.36                              |
| Federal, Civilian                     | 0.93                         | -0.07                              | 0.84                         | -0.20                              |
| Military                              | 1.05                         | 0.05                               | 0.70                         | -0.43                              |
| State and Local                       | 0.71                         | -0.40                              | 0.72                         | -0.39                              |

Table 5N : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Houston Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.23                         | -3.33                              | 0.13                         | -6.54                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.13                         | 0.11                               | 1.10                         | 0.09                               |
| Ag.Serv., For., Fish., and Other      | 0.60                         | -0.68                              | 0.63                         | -0.60                              |
| Mining                                | 4.35                         | 0.77                               | 5.84                         | 0.83                               |
| Construction                          | 1.71                         | 0.42                               | 1.69                         | 0.41                               |
| Manufacturing                         | 0.71                         | -0.40                              | 0.62                         | -0.60                              |
| Transportation and Public Utilities   | 1.38                         | 0.27                               | 1.29                         | 0.23                               |
| Wholesale Trade                       | 1.77                         | 0.43                               | 1.38                         | 0.28                               |
| Retail Trade                          | 1.05                         | 0.05                               | 1.01                         | 0.01                               |
| Finance, Insurance, and Real Estate   | 1.17                         | 0.14                               | 1.20                         | 0.17                               |
| Services                              | 1.19                         | 0.16                               | 1.04                         | 0.04                               |
| Government and Government Enterprises | 0.65                         | -0.53                              | 0.68                         | -0.48                              |
| Federal, Civilian                     | 0.63                         | -0.58                              | 0.51                         | -0.94                              |
| Military                              | 0.32                         | -2.14                              | 0.30                         | -2.31                              |
| State and Local                       | 0.77                         | -0.30                              | 0.79                         | -0.27                              |

Table 50 : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Indianapolis Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.47                         | -1.12                              | 0.51                         | -0.97                              |
| Non-farm                              | 1.03                         | 0.03                               | 1.02                         | 0.02                               |
| Private                               | 1.07                         | 0.06                               | 1.03                         | 0.03                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.51                         | -0.95                              |
| Mining                                | 0.00                         | ERR                                | 0.23                         | -3.35                              |
| Construction                          | 1.06                         | 0.06                               | 0.95                         | -0.05                              |
| Manufacturing                         | 1.15                         | 0.13                               | 1.05                         | 0.04                               |
| Transportation and Public Utilities   | 1.10                         | 0.09                               | 1.01                         | 0.01                               |
| Wholesale Trade                       | 1.29                         | 0.22                               | 1.15                         | 0.13                               |
| Retail Trade                          | 1.05                         | 0.05                               | 1.08                         | 0.08                               |
| Finance, Insurance, and Real Estate   | 1.36                         | 0.26                               | 1.20                         | 0.17                               |
| Services                              | 0.85                         | -0.18                              | 0.97                         | -0.03                              |
| Government and Government Enterprises | 0.85                         | -0.17                              | 0.93                         | -0.07                              |
| Federal, Civilian                     | 1.03                         | 0.03                               | 1.08                         | 0.07                               |
| Military                              | 0.49                         | -1.03                              | 0.64                         | -0.57                              |
| State and Local                       | 0.92                         | -0.09                              | 0.96                         | -0.04                              |



Table 5P : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Jacksonville Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.21                         | -3.72                              | 0.18                         | -4.52                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 0.97                         | -0.03                              | 0.98                         | -0.02                              |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Mining                                | 0.00                         | ERR                                | 0.15                         | -5.78                              |
| Construction                          | 1.25                         | 0.20                               | 1.38                         | 0.28                               |
| Manufacturing                         | 0.00                         | ERR                                | 0.52                         | -0.94                              |
| Transportation and Public Utilities   | 1.40                         | 0.29                               | 1.42                         | 0.30                               |
| Wholesale Trade                       | 1.62                         | 0.38                               | 1.23                         | 0.19                               |
| Retail Trade                          | 1.03                         | 0.03                               | 1.06                         | 0.05                               |
| Finance, Insurance, and Real Estate   | 1.46                         | 0.31                               | 1.32                         | 0.24                               |
| Services                              | 1.05                         | 0.05                               | 0.96                         | -0.04                              |
| Government and Government Enterprises | 1.34                         | 0.25                               | 1.26                         | 0.21                               |
| Federal, Civilian                     | 1.55                         | 0.36                               | 1.45                         | 0.31                               |
| Military                              | 2.71                         | 0.63                               | 3.51                         | 0.72                               |
| State and Local                       | 0.82                         | -0.22                              | 0.76                         | -0.31                              |

Table 5Q : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Kansas City Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.54                         | -0.85                              | 0.53                         | -0.90                              |
| Non-farm                              | 1.02                         | 0.02                               | 1.02                         | 0.02                               |
| Private                               | 1.06                         | 0.05                               | 1.03                         | 0.03                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Mining                                | 0.00                         | ERR                                | 0.29                         | -2.48                              |
| Construction                          | 0.97                         | -0.03                              | 0.94                         | -0.06                              |
| Manufacturing                         | 0.91                         | -0.10                              | 0.88                         | -0.14                              |
| Transportation and Public Utilities   | 1.61                         | 0.38                               | 1.43                         | 0.30                               |
| Wholesale Trade                       | 1.52                         | 0.34                               | 1.32                         | 0.24                               |
| Retail Trade                          | 1.07                         | 0.07                               | 1.03                         | 0.03                               |
| Finance, Insurance, and Real Estate   | 1.26                         | 0.21                               | 1.20                         | 0.17                               |
| Services                              | 0.98                         | -0.02                              | 1.03                         | 0.03                               |
| Government and Government Enterprises | 0.88                         | -0.14                              | 0.92                         | -0.08                              |
| Federal, Civilian                     | 1.38                         | 0.27                               | 1.40                         | 0.28                               |
| Military                              | 0.66                         | -0.52                              | 0.82                         | -0.21                              |
| State and Local                       | 0.80                         | -0.25                              | 0.84                         | -0.20                              |

Table 5R : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Los Angeles Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.05                         | -20.98                             | 0.05                         | -18.11                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.12                         | 0.10                               | 1.09                         | 0.09                               |
| Ag.Serv., For., Fish., and Other      | 0.87                         | -0.15                              | 0.99                         | -0.01                              |
| Mining                                | 0.47                         | -1.12                              | 0.34                         | -1.95                              |
| Construction                          | 0.77                         | -0.30                              | 0.64                         | -0.57                              |
| Manufacturing                         | 1.17                         | 0.14                               | 1.23                         | 0.18                               |
| Transportation and Public Utilities   | 1.02                         | 0.02                               | 1.01                         | 0.01                               |
| Wholesale Trade                       | 1.33                         | 0.25                               | 1.34                         | 0.25                               |
| Retail Trade                          | 1.02                         | 0.02                               | 0.93                         | -0.08                              |
| Finance, Insurance, and Real Estate   | 1.25                         | 0.20                               | 1.15                         | 0.13                               |
| Services                              | 1.20                         | 0.16                               | 1.19                         | 0.16                               |
| Government and Government Enterprises | 0.76                         | -0.31                              | 0.71                         | -0.40                              |
| Federal, Civilian                     | 0.65                         | -0.54                              | 0.63                         | -0.60                              |
| Military                              | 0.55                         | -0.83                              | 0.40                         | -1.50                              |
| State and Local                       | 0.87                         | -0.15                              | 0.80                         | -0.25                              |



Table 5S : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Memphis Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.53                         | -0.89                              | 0.47                         | -1.12                              |
| Non-farm                              | 1.02                         | 0.02                               | 1.02                         | 0.02                               |
| Private                               | 1.01                         | 0.01                               | 1.01                         | 0.01                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.50                         | -1.00                              |
| Mining                                | 0.00                         | ERR                                | 0.12                         | -7.27                              |
| Construction                          | 0.99                         | -0.01                              | 0.96                         | -0.04                              |
| Manufacturing                         | 0.83                         | -0.21                              | 0.76                         | -0.32                              |
| Transportation and Public Utilities   | 1.16                         | 0.14                               | 1.40                         | 0.29                               |
| Wholesale Trade                       | 1.87                         | 0.47                               | 1.54                         | 0.35                               |
| Retail Trade                          | 0.94                         | -0.06                              | 1.05                         | 0.05                               |
| Finance, Insurance, and Real Estate   | 0.92                         | -0.09                              | 0.98                         | -0.02                              |
| Services                              | 1.03                         | 0.03                               | 1.04                         | 0.04                               |
| Government and Government Enterprises | 1.10                         | 0.09                               | 1.05                         | 0.05                               |
| Federal, Civilian                     | 1.10                         | 0.09                               | 1.40                         | 0.28                               |
| Military                              | 1.52                         | 0.34                               | 1.40                         | 0.28                               |
| State and Local                       | 0.95                         | -0.05                              | 0.90                         | -0.11                              |

Table 5T : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Milwaukee Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.20                         | -4.10                              | 0.20                         | -4.00                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.14                         | 0.12                               | 1.09                         | 0.08                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.42                         | -1.39                              |
| Mining                                | 0.00                         | ERR                                | 0.14                         | -5.97                              |
| Construction                          | 0.92                         | -0.09                              | 0.67                         | -0.49                              |
| Manufacturing                         | 1.45                         | 0.31                               | 1.38                         | 0.28                               |
| Transportation and Public Utilities   | 0.97                         | -0.03                              | 0.98                         | -0.02                              |
| Wholesale Trade                       | 1.17                         | 0.14                               | 1.10                         | 0.09                               |
| Retail Trade                          | 1.11                         | 0.10                               | 1.00                         | 0.00                               |
| Finance, Insurance, and Real Estate   | 1.05                         | 0.04                               | 1.15                         | 0.13                               |
| Services                              | 0.96                         | -0.04                              | 1.10                         | 0.09                               |
| Government and Government Enterprises | 0.63                         | -0.59                              | 0.70                         | -0.43                              |
| Federal, Civilian                     | 0.52                         | -0.94                              | 0.53                         | -0.88                              |
| Military                              | 0.35                         | -1.84                              | 0.55                         | -0.83                              |
| State and Local                       | 0.75                         | -0.33                              | 0.76                         | -0.31                              |

Table 5U : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Minneapolis-St. Paul Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.40                         | -1.48                              | 0.40                         | -1.52                              |
| Non-farm                              | 1.03                         | 0.03                               | 1.02                         | 0.02                               |
| Private                               | 1.09                         | 0.08                               | 1.07                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.45                         | -1.23                              | 0.00                         | ERR                                |
| Mining                                | 0.09                         | -9.64                              | 0.00                         | ERR                                |
| Construction                          | 1.07                         | 0.06                               | 0.85                         | -0.18                              |
| Manufacturing                         | 1.07                         | 0.07                               | 1.16                         | 0.14                               |
| Transportation and Public Utilities   | 1.20                         | 0.17                               | 1.08                         | 0.08                               |
| Wholesale Trade                       | 1.49                         | 0.33                               | 0.00                         | ERR                                |
| Retail Trade                          | 1.09                         | 0.09                               | 1.06                         | 0.06                               |
| Finance, Insurance, and Real Estate   | 1.23                         | 0.19                               | 1.18                         | 0.15                               |
| Services                              | 1.00                         | 0.00                               | 1.07                         | 0.06                               |
| Government and Government Enterprises | 0.78                         | -0.28                              | 0.74                         | -0.35                              |
| Federal, Civilian                     | 0.67                         | -0.49                              | 0.57                         | -0.75                              |
| Military                              | 0.42                         | -1.37                              | 0.32                         | -2.08                              |
| State and Local                       | 0.93                         | -0.07                              | 0.87                         | -0.15                              |



Table 5V : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Nashville Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 1.09                         | 0.08                               | 0.99                         | -0.01                              |
| Non-farm                              | 1.00                         | 0.00                               | 1.00                         | 0.00                               |
| Private                               | 1.02                         | 0.02                               | 1.04                         | 0.04                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Mining                                | 0.11                         | -8.38                              | 0.00                         | ERR                                |
| Construction                          | 1.25                         | 0.20                               | 1.19                         | 0.16                               |
| Manufacturing                         | 0.94                         | -0.07                              | 1.03                         | 0.03                               |
| Transportation and Public Utilities   | 0.83                         | -0.20                              | 1.12                         | 0.11                               |
| Wholesale Trade                       | 1.36                         | 0.26                               | 1.14                         | 0.12                               |
| Retail Trade                          | 0.87                         | -0.15                              | 1.02                         | 0.02                               |
| Finance, Insurance, and Real Estate   | 1.29                         | 0.23                               | 1.06                         | 0.05                               |
| Services                              | 1.11                         | 0.10                               | 1.03                         | 0.03                               |
| Government and Government Enterprises | 0.90                         | -0.11                              | 0.79                         | -0.27                              |
| Federal, Civilian                     | 0.76                         | -0.32                              | 0.75                         | -0.34                              |
| Military                              | 0.76                         | -0.32                              | 0.36                         | -1.78                              |
| State and Local                       | 0.99                         | -0.01                              | 0.89                         | -0.13                              |

Table 5W : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, New Orleans Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.08                         | -10.94                             | 0.07                         | -14.03                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.04                         | 0.04                               |
| Ag.Serv., For., Fish., and Other      | 0.70                         | -0.43                              | 0.53                         | -0.89                              |
| Mining                                | 4.34                         | 0.77                               | 3.28                         | 0.70                               |
| Construction                          | 1.23                         | 0.19                               | 1.27                         | 0.21                               |
| Manufacturing                         | 0.56                         | -0.79                              | 0.45                         | -1.22                              |
| Transportation and Public Utilities   | 1.95                         | 0.49                               | 1.67                         | 0.40                               |
| Wholesale Trade                       | 1.59                         | 0.37                               | 1.15                         | 0.13                               |
| Retail Trade                          | 1.02                         | 0.02                               | 1.10                         | 0.09                               |
| Finance, Insurance, and Real Estate   | 1.11                         | 0.10                               | 1.04                         | 0.04                               |
| Services                              | 1.25                         | 0.20                               | 1.15                         | 0.13                               |
| Government and Government Enterprises | 0.89                         | -0.13                              | 0.96                         | -0.04                              |
| Federal, Civilian                     | 0.86                         | -0.16                              | 0.91                         | -0.10                              |
| Military                              | 0.41                         | -1.45                              | 0.63                         | -0.60                              |
| State and Local                       | 1.05                         | 0.05                               | 1.05                         | 0.04                               |

Table 5X : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, New York Metropolitan Area, 1969 and 1984

|                                                 | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|-------------------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                            | 0.00                         | -290.47                            | 0.01                         | -180.92                            |
| Non-farm                                        | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                                         | 1.12                         | 0.10                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other                | 0.39                         | -1.59                              | 0.00                         | FRR                                |
| Mining                                          | 0.09                         | -10.02                             | 0.00                         | FRR                                |
| Construction                                    | 0.00                         | FRR                                | 0.63                         | -0.59                              |
| Manufacturing                                   | 0.86                         | -0.16                              | 0.71                         | -0.41                              |
| Transportation and Public Utilities             | 1.36                         | 0.26                               | 1.33                         | 0.25                               |
| Wholesale Trade                                 | 1.65                         | 0.39                               | 1.37                         | 0.27                               |
| Retail Trade                                    | 0.84                         | -0.19                              | 0.72                         | -0.39                              |
| Finance, Insurance, and Real Estate<br>Services | 2.16                         | 0.54                               | 1.85                         | 0.46                               |
| Government and Government Enterprises           | 1.32                         | 0.24                               | 1.35                         | 0.26                               |
| Federal, Civilian                               | 0.78                         | -0.29                              | 0.88                         | -0.14                              |
| Military                                        | 0.74                         | -0.34                              | 0.75                         | -0.33                              |
| State and Local                                 | 0.30                         | -2.32                              | 0.22                         | -3.45                              |
|                                                 | 0.95                         | -0.05                              | 1.04                         | 0.04                               |

Table 5Y : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Oklahoma City Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.57                         | -0.75                              | 0.47                         | -1.13                              |
| Non-farm                              | 1.02                         | 0.02                               | 1.02                         | 0.02                               |
| Private                               | 0.92                         | -0.09                              | 0.96                         | -0.04                              |
| Ag.Serv., For., Fish., and Other      | 0.52                         | -0.92                              | 0.45                         | -1.23                              |
| Mining                                | 3.37                         | 0.70                               | 6.10                         | 0.84                               |
| Construction                          | 1.15                         | 0.13                               | 1.09                         | 0.08                               |
| Manufacturing                         | 0.50                         | -1.00                              | 0.60                         | -0.66                              |
| Transportation and Public Utilities   | 1.10                         | 0.09                               | 0.95                         | -0.05                              |
| Wholesale Trade                       | 1.16                         | 0.14                               | 1.00                         | 0.00                               |
| Retail Trade                          | 1.06                         | 0.05                               | 1.06                         | 0.05                               |
| Finance, Insurance, and Real Estate   | 1.19                         | 0.16                               | 1.12                         | 0.11                               |
| Services                              | 0.98                         | -0.02                              | 0.86                         | -0.16                              |
| Government and Government Enterprises | 1.47                         | 0.32                               | 1.29                         | 0.22                               |
| Federal, Civilian                     | 3.43                         | 0.71                               | 2.11                         | 0.53                               |
| Military                              | 0.82                         | -0.23                              | 1.14                         | 0.12                               |
| State and Local                       | 1.11                         | 0.10                               | 1.13                         | 0.12                               |



Table 52 : Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Philadelphia Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.14                         | -6.40                              | 0.21                         | -3.82                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.08                         | 0.07                               | 1.05                         | 0.05                               |
| Ag.Serv., For., Fish., and Other      | 0.61                         | -0.64                              | 0.61                         | -0.65                              |
| Mining                                | 0.11                         | -8.42                              | 0.09                         | -10.44                             |
| Construction                          | 0.98                         | -0.02                              | 0.89                         | -0.13                              |
| Manufacturing                         | 1.19                         | 0.16                               | 1.04                         | 0.04                               |
| Transportation and Public Utilities   | 0.98                         | -0.02                              | 0.92                         | -0.09                              |
| Wholesale Trade                       | 1.15                         | 0.13                               | 1.18                         | 0.15                               |
| Retail Trade                          | 0.99                         | -0.01                              | 1.00                         | 0.00                               |
| Finance, Insurance, and Real Estate   | 1.08                         | 0.07                               | 1.07                         | 0.07                               |
| Services                              | 1.09                         | 0.08                               | 1.18                         | 0.15                               |
| Government and Government Enterprises | 0.91                         | -0.10                              | 0.90                         | -0.11                              |
| Federal, Civilian                     | 1.33                         | 0.25                               | 1.29                         | 0.22                               |
| Military                              | 1.04                         | 0.03                               | 0.92                         | -0.09                              |
| State and Local                       | 0.75                         | -0.34                              | 0.81                         | -0.24                              |

Table 5AA: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Phoenix Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.51                         | -0.97                              | 0.31                         | -2.20                              |
| Non-farm                              | 1.03                         | 0.02                               | 1.02                         | 0.02                               |
| Private                               | 1.04                         | 0.04                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 1.44                         | 0.31                               | 1.43                         | 0.30                               |
| Mining                                | 0.10                         | -9.10                              | 0.23                         | -3.42                              |
| Construction                          | 1.17                         | 0.15                               | 1.66                         | 0.40                               |
| Manufacturing                         | 0.84                         | -0.19                              | 0.83                         | -0.20                              |
| Transportation and Public Utilities   | 0.88                         | -0.13                              | 0.84                         | -0.19                              |
| Wholesale Trade                       | 1.10                         | 0.09                               | 1.03                         | 0.03                               |
| Retail Trade                          | 1.18                         | 0.15                               | 1.10                         | 0.09                               |
| Finance, Insurance, and Real Estate   | 1.35                         | 0.26                               | 1.37                         | 0.27                               |
| Services                              | 1.11                         | 0.10                               | 1.06                         | 0.05                               |
| Government and Government Enterprises | 0.97                         | -0.03                              | 0.82                         | -0.22                              |
| Federal, Civilian                     | 0.77                         | -0.30                              | 0.66                         | -0.51                              |
| Military                              | 0.96                         | -0.04                              | 0.76                         | -0.32                              |
| State and Local                       | 1.04                         | 0.04                               | 0.87                         | -0.15                              |

Table 5AB: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Pittsburgh Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.14                         | -5.99                              | 0.19                         | -4.21                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.12                         | 0.11                               | 1.08                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.40                         | -1.49                              | 0.45                         | -1.20                              |
| Mining                                | 1.29                         | 0.22                               | 0.79                         | -0.27                              |
| Construction                          | 1.11                         | 0.10                               | 1.04                         | 0.04                               |
| Manufacturing                         | 1.17                         | 0.15                               | 0.92                         | -0.08                              |
| Transportation and Public Utilities   | 1.19                         | 0.16                               | 1.08                         | 0.08                               |
| Wholesale Trade                       | 1.11                         | 0.10                               | 1.06                         | 0.06                               |
| Retail Trade                          | 1.08                         | 0.07                               | 1.15                         | 0.13                               |
| Finance, Insurance, and Real Estate   | 0.92                         | -0.08                              | 0.96                         | -0.04                              |
| Services                              | 1.15                         | 0.13                               | 1.23                         | 0.19                               |
| Government and Government Enterprises | 0.72                         | -0.40                              | 0.75                         | -0.33                              |
| Federal, Civilian                     | 0.55                         | -0.83                              | 0.70                         | -0.42                              |
| Military                              | 0.37                         | -1.72                              | 0.53                         | -0.89                              |
| State and Local                       | 0.89                         | -0.13                              | 0.81                         | -0.23                              |

Table 5AC: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, San Antonio Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.32                         | -2.09                              | 0.29                         | -2.49                              |
| Non-farm                              | 1.04                         | 0.03                               | 1.02                         | 0.02                               |
| Private                               | 0.78                         | -0.28                              | 0.92                         | -0.08                              |
| Ag.Serv., For., Fish., and Other      | 0.33                         | -2.01                              | 0.44                         | -1.28                              |
| Mining                                | 0.86                         | -0.16                              | 1.12                         | 0.10                               |
| Construction                          | 1.01                         | 0.01                               | 1.46                         | 0.31                               |
| Manufacturing                         | 0.41                         | -1.44                              | 0.54                         | -0.85                              |
| Transportation and Public Utilities   | 0.60                         | -0.67                              | 0.72                         | -0.39                              |
| Wholesale Trade                       | 1.02                         | 0.02                               | 0.91                         | -0.10                              |
| Retail Trade                          | 0.99                         | -0.01                              | 1.11                         | 0.10                               |
| Finance, Insurance, and Real Estate   | 1.02                         | 0.02                               | 1.16                         | 0.14                               |
| Services                              | 0.95                         | -0.05                              | 0.94                         | -0.06                              |
| Government and Government Enterprises | 2.13                         | 0.53                               | 1.52                         | 0.34                               |
| Federal, Civilian                     | 3.61                         | 0.72                               | 2.61                         | 0.62                               |
| Military                              | 4.61                         | 0.78                               | 3.19                         | 0.69                               |
| State and Local                       | 0.85                         | -0.17                              | 0.94                         | -0.07                              |



Table 5AD: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, San Diego Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.36                         | -1.81                              | 0.40                         | -1.50                              |
| Non-farm                              | 1.03                         | 0.03                               | 1.02                         | 0.02                               |
| Private                               | 0.73                         | -0.37                              | 0.89                         | -0.12                              |
| Ag.Serv., For., Fish., and other      | 1.29                         | 0.23                               | 1.63                         | 0.39                               |
| Mining                                | 0.00                         | ERR                                | 0.16                         | -5.20                              |
| Construction                          | 0.00                         | ERR                                | 1.01                         | 0.01                               |
| Manufacturing                         | 0.50                         | -1.01                              | 0.67                         | -0.49                              |
| Transportation and Public Utilities   | 0.61                         | -0.65                              | 0.66                         | -0.52                              |
| Wholesale Trade                       | 0.54                         | -0.85                              | 0.66                         | -0.51                              |
| Retail Trade                          | 0.89                         | -0.12                              | 0.96                         | -0.04                              |
| Finance, Insurance, and Real Estate   | 0.89                         | -0.12                              | 1.12                         | 0.11                               |
| Services                              | 0.92                         | -0.09                              | 1.02                         | 0.02                               |
| Government and Government Enterprises | 2.34                         | 0.57                               | 1.65                         | 0.39                               |
| Federal, Civilian                     | 2.04                         | 0.51                               | 1.60                         | 0.37                               |
| Military                              | 6.98                         | 0.86                               | 5.71                         | 0.82                               |
| State and Local                       | 0.87                         | -0.15                              | 0.84                         | -0.19                              |

Table 5AE: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, San Francisco Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.07                         | -13.98                             | 0.08                         | -11.38                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.05                         | 0.05                               | 1.07                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.92                         | -0.09                              | 0.00                         | ERR                                |
| Mining                                | 0.12                         | -7.29                              | 0.00                         | ERR                                |
| Construction                          | 0.89                         | -0.13                              | 0.69                         | -0.45                              |
| Manufacturing                         | 0.50                         | -1.00                              | 0.49                         | -1.05                              |
| Transportation and Public Utilities   | 2.06                         | 0.52                               | 1.65                         | 0.39                               |
| Wholesale Trade                       | 1.55                         | 0.36                               | 1.20                         | 0.17                               |
| Retail Trade                          | 0.91                         | -0.10                              | 0.92                         | -0.09                              |
| Finance, Insurance, and Real Estate   | 2.02                         | 0.50                               | 1.86                         | 0.46                               |
| Services                              | 1.25                         | 0.20                               | 1.34                         | 0.25                               |
| Government and Government Enterprises | 1.03                         | 0.03                               | 0.81                         | -0.24                              |
| Federal, Civilian                     | 1.81                         | 0.45                               | 1.27                         | 0.21                               |
| Military                              | 0.89                         | -0.13                              | 0.48                         | -1.07                              |
| State and Local                       | 0.85                         | -0.18                              | 0.77                         | -0.30                              |

Table 5AF: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, San Jose Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.30                         | -2.34                              | 0.17                         | -4.92                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.11                         | 0.10                               |
| Ag.Serv., For., Fish., and other      | 1.13                         | 0.11                               | 1.00                         | 0.00                               |
| Mining                                | 0.07                         | -13.04                             | 0.09                         | -10.25                             |
| Construction                          | 1.00                         | 0.00                               | 0.79                         | -0.26                              |
| Manufacturing                         | 1.29                         | 0.22                               | 1.93                         | 0.48                               |
| Transportation and Public Utilities   | 0.75                         | -0.34                              | 0.55                         | -0.83                              |
| Wholesale Trade                       | 0.76                         | -0.32                              | 0.83                         | -0.20                              |
| Retail Trade                          | 0.97                         | -0.03                              | 0.80                         | -0.25                              |
| Finance, Insurance, and Real Estate   | 0.96                         | -0.04                              | 0.80                         | -0.24                              |
| Services                              | 1.22                         | 0.18                               | 1.12                         | 0.11                               |
| Government and Government Enterprises | 0.81                         | -0.23                              | 0.61                         | -0.63                              |
| Federal, Civilian                     | 0.65                         | -0.53                              | 0.53                         | -0.89                              |
| Military                              | 0.67                         | -0.49                              | 0.53                         | -0.90                              |
| State and Local                       | 0.91                         | -0.10                              | 0.65                         | -0.54                              |

Table 5AG: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Seattle Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.15                         | -5.66                              | 0.19                         | -4.32                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.08                         | 0.07                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 1.19                         | 0.16                               | 1.43                         | 0.30                               |
| Mining                                | 0.11                         | -8.25                              | 0.12                         | -7.03                              |
| Construction                          | 1.07                         | 0.06                               | 1.03                         | 0.03                               |
| Manufacturing                         | 1.08                         | 0.08                               | 0.96                         | -0.04                              |
| Transportation and Public Utilities   | 1.17                         | 0.15                               | 1.21                         | 0.17                               |
| Wholesale Trade                       | 1.32                         | 0.24                               | 1.24                         | 0.19                               |
| Retail Trade                          | 1.01                         | 0.01                               | 1.05                         | 0.05                               |
| Finance, Insurance, and Real Estate   | 1.46                         | 0.31                               | 1.28                         | 0.22                               |
| Services                              | 0.97                         | -0.03                              | 1.03                         | 0.03                               |
| Government and Government Enterprises | 0.90                         | -0.11                              | 0.86                         | -0.16                              |
| Federal, Civilian                     | 0.75                         | -0.33                              | 0.81                         | -0.24                              |
| Military                              | 0.50                         | -1.01                              | 0.56                         | -0.80                              |
| State and Local                       | 1.08                         | 0.07                               | 0.94                         | -0.07                              |



Table 5AH: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, St. Louis Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.30                         | -2.33                              | 0.34                         | -1.94                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.02                         | 0.02                               |
| Private                               | 1.10                         | 0.09                               | 1.07                         | 0.06                               |
| Ag.Serv., For., Fish., and other      | 0.00                         | ERR                                | 0.52                         | -0.91                              |
| Mining                                | 0.00                         | ERR                                | 0.34                         | -1.96                              |
| Construction                          | 0.94                         | -0.06                              | 1.02                         | 0.02                               |
| Manufacturing                         | 1.16                         | 0.14                               | 1.08                         | 0.08                               |
| Transportation and Public Utilities   | 1.26                         | 0.21                               | 1.26                         | 0.21                               |
| Wholesale Trade                       | 1.24                         | 0.19                               | 1.06                         | 0.06                               |
| Retail Trade                          | 1.01                         | 0.01                               | 1.01                         | 0.01                               |
| Finance, Insurance, and Real Estate   | 1.11                         | 0.10                               | 0.99                         | -0.01                              |
| Services                              | 1.09                         | 0.08                               | 1.15                         | 0.13                               |
| Government and Government Enterprises | 0.78                         | -0.29                              | 0.79                         | -0.26                              |
| Federal, Civilian                     | 1.18                         | 0.15                               | 1.18                         | 0.15                               |
| Military                              | 0.51                         | -0.96                              | 0.77                         | -0.30                              |
| State and Local                       | 0.75                         | -0.34                              | 0.71                         | -0.41                              |

Table 5AI: Employment Location Quotient, Export(+), and Import(-) Roles by Sector, Washington, DC Metropolitan Area, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.14                         | -5.94                              | 0.15                         | -5.60                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 0.77                         | -0.30                              | 0.86                         | -0.16                              |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.64                         | -0.56                              |
| Mining                                | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Construction                          | 1.10                         | 0.09                               | 1.07                         | 0.06                               |
| Manufacturing                         | 0.15                         | -5.48                              | 0.22                         | -3.54                              |
| Transportation and Public Utilities   | 0.81                         | -0.23                              | 0.87                         | -0.15                              |
| Wholesale Trade                       | 0.60                         | -0.66                              | 0.65                         | -0.54                              |
| Retail Trade                          | 0.93                         | -0.07                              | 0.88                         | -0.13                              |
| Finance, Insurance, and Real Estate   | 1.11                         | 0.10                               | 0.98                         | -0.02                              |
| Services                              | 1.25                         | 0.20                               | 1.30                         | 0.23                               |
| Government and Government Enterprises | 2.23                         | 0.55                               | 1.87                         | 0.47                               |
| Federal, Civilian                     | 6.82                         | 0.85                               | 6.74                         | 0.85                               |
| Military                              | 1.97                         | 0.49                               | 1.88                         | 0.47                               |
| State and Local                       | 0.95                         | -0.05                              | 0.77                         | -0.30                              |

Notes: 0" and "ERR" indicate that data are undisclosed.

The location quotient is  $= (E_{ij}/E_j)/(E_i/E)$  where

$E_{ij}$  = employment in industry  $i$  in metro area  $j$

$E_j$  = total employment in metro area  $j$

$E_i$  = employment in industry  $i$  in the nation

$E$  = total employment in the nation

The net import/net export concept is based on the location quotient ( $LQ$ ) and equal to  $(1 - (1/LQ))$

Table 6A : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Atlanta Central City Counties - Fulton and De Kalb, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.03                         | -32.55                             | 0.02                         | -44.48                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.11                         | 0.10                               | 1.06                         | 0.06                               |
| Ag.Serv.,For.,Fish.,and Other         | 0.39                         | -1.54                              | 0.46                         | -1.18                              |
| Mining                                | 0.10                         | -8.84                              | 0.15                         | -5.82                              |
| Construction                          | 1.20                         | 0.17                               | 0.97                         | -0.04                              |
| Manufacturing                         | 0.62                         | -0.61                              | 0.57                         | -0.74                              |
| Transportation and Public Utilities   | 1.73                         | 0.42                               | 1.64                         | 0.39                               |
| Wholesale Trade                       | 2.39                         | 0.58                               | 2.27                         | 0.56                               |
| Retail Trade                          | 1.04                         | 0.04                               | 0.96                         | -0.04                              |
| Finance, Insurance and Real Estate    | 1.55                         | 0.35                               | 1.34                         | 0.25                               |
| Services                              | 1.20                         | 0.17                               | 1.11                         | 0.10                               |
| Government and Government Enterprises | 0.78                         | -0.27                              | 0.87                         | -0.15                              |
| Federal, Civilian                     | 1.12                         | 0.10                               | 1.29                         | 0.23                               |
| Military                              | 0.47                         | -1.15                              | 0.61                         | -0.63                              |
| State and Local                       | 0.79                         | -0.26                              | 0.83                         | -0.21                              |



Table 6B : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Baltimore (Independent City), 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.04                         | 0.04                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.23                         | -3.30                              |
| Mining                                | 0.00                         | ERR                                | 0.03                         | -29.79                             |
| Construction                          | 0.96                         | -0.04                              | 0.84                         | -0.20                              |
| Manufacturing                         | 0.88                         | -0.13                              | 0.65                         | -0.54                              |
| Transportation and Public Utilities   | 1.55                         | 0.35                               | 1.46                         | 0.31                               |
| Wholesale Trade                       | 1.40                         | 0.28                               | 1.15                         | 0.13                               |
| Retail Trade                          | 1.06                         | 0.05                               | 0.91                         | -0.09                              |
| Finance, Insurance and Real Estate    | 1.41                         | 0.29                               | 1.36                         | 0.27                               |
| Services                              | 1.19                         | 0.16                               | 1.31                         | 0.23                               |
| Government and Government Enterprises | 0.88                         | -0.14                              | 1.01                         | 0.01                               |
| Federal, Civilian                     | 0.87                         | -0.15                              | 1.08                         | 0.08                               |
| Military                              | 0.42                         | -1.41                              | 0.38                         | -1.62                              |
| State and Local                       | 1.03                         | 0.03                               | 1.13                         | 0.11                               |

Table 6C : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Boston Central City County - Suffolk, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.04                         | 0.04                               |
| Ag.Serv.,For.,Fish.,and Other         | 0.28                         | -2.60                              | 0.20                         | -3.96                              |
| Mining                                | 0.03                         | -36.13                             | 0.02                         | -39.18                             |
| Construction                          | 0.78                         | -0.28                              | 0.46                         | -1.19                              |
| Manufacturing                         | 0.55                         | -0.83                              | 0.49                         | -1.03                              |
| Transportation and Public Utilities   | 1.37                         | 0.27                               | 1.36                         | 0.27                               |
| Wholesale Trade                       | 1.74                         | 0.42                               | 1.02                         | 0.02                               |
| Retail Trade                          | 0.98                         | -0.02                              | 0.73                         | -0.37                              |
| Finance, Insurance and Real Estate    | 2.37                         | 0.58                               | 1.90                         | 0.47                               |
| Services                              | 1.39                         | 0.28                               | 1.53                         | 0.35                               |
| Government and Government Enterprises | 0.90                         | -0.11                              | 0.98                         | -0.02                              |
| Federal, Civilian                     | 1.57                         | 0.36                               | 1.37                         | 0.27                               |
| Military                              | 0.61                         | -0.64                              | 0.38                         | -1.65                              |
| State and Local                       | 0.80                         | -0.26                              | 1.01                         | 0.01                               |

Table 6D : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Buffalo Central City County - Erie, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.13                         | -6.69                              | 0.23                         | -3.27                              |
| Non-farm                              | 1.05                         | 0.04                               | 1.03                         | 0.02                               |
| Private                               | 1.08                         | 0.07                               | 1.04                         | 0.03                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.44                         | -1.27                              |
| Mining                                | 0.00                         | ERR                                | 0.21                         | -3.66                              |
| Construction                          | 0.87                         | -0.15                              | 0.73                         | -0.36                              |
| Manufacturing                         | 1.28                         | 0.22                               | 1.06                         | 0.06                               |
| Transportation and Public Utilities   | 1.25                         | 0.20                               | 1.01                         | 0.01                               |
| Wholesale Trade                       | 1.14                         | 0.12                               | 1.11                         | 0.10                               |
| Retail Trade                          | 1.12                         | 0.11                               | 1.10                         | 0.09                               |
| Finance, Insurance and Real Estate    | 0.90                         | -0.11                              | 0.94                         | -0.06                              |
| Services                              | 0.90                         | -0.11                              | 1.11                         | 0.10                               |
| Government and Government Enterprises | 0.89                         | -0.12                              | 0.98                         | -0.02                              |
| Federal, Civilian                     | 0.54                         | -0.84                              | 0.72                         | -0.38                              |
| Military                              | 0.33                         | -2.01                              | 0.24                         | -3.09                              |
| State and Local                       | 1.19                         | 0.16                               | 1.18                         | 0.15                               |

Table 6E : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Chicago Central City County - Cook, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.01                         | -74.50                             | 0.01                         | -67.67                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.15                         | 0.13                               | 1.09                         | 0.08                               |
| Ag.Serv., For., Fish., and Other      | 0.30                         | -2.32                              | 0.31                         | -2.19                              |
| Mining                                | 0.22                         | -3.56                              | 0.15                         | -5.64                              |
| Construction                          | 0.89                         | -0.12                              | 0.69                         | -0.45                              |
| Manufacturing                         | 1.28                         | 0.22                               | 1.16                         | 0.14                               |
| Transportation and Public Utilities   | 1.26                         | 0.21                               | 1.20                         | 0.16                               |
| Wholesale Trade                       | 1.67                         | 0.40                               | 1.52                         | 0.34                               |
| Retail Trade                          | 0.99                         | -0.01                              | 0.94                         | -0.06                              |
| Finance, Insurance and Real Estate    | 1.30                         | 0.23                               | 1.32                         | 0.24                               |
| Services                              | 1.02                         | 0.02                               | 1.12                         | 0.11                               |
| Government and Government Enterprises | 0.64                         | -0.55                              | 0.74                         | -0.35                              |
| Federal, Civilian                     | 0.70                         | -0.44                              | 0.77                         | -0.29                              |
| Military                              | 0.24                         | -3.08                              | 0.23                         | -3.27                              |
| State and Local                       | 0.76                         | -0.31                              | 0.84                         | -0.19                              |



Table 6F : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Cincinnati Central City County - Hamilton, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.03                         | -30.18                             | 0.06                         | -16.59                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.15                         | 0.13                               | 1.10                         | 0.09                               |
| Ag.Serv., For., Fish., and Other      | 0.41                         | -1.46                              | 0.38                         | -1.63                              |
| Mining                                | 0.09                         | -10.66                             | 0.12                         | -7.19                              |
| Construction                          | 1.01                         | 0.01                               | 0.83                         | -0.20                              |
| Manufacturing                         | 1.40                         | 0.28                               | 1.36                         | 0.26                               |
| Transportation and Public Utilities   | 1.19                         | 0.16                               | 1.05                         | 0.05                               |
| Wholesale Trade                       | 1.36                         | 0.27                               | 1.30                         | 0.23                               |
| Retail Trade                          | 0.96                         | -0.04                              | 1.02                         | 0.02                               |
| Finance, Insurance and Real Estate    | 1.16                         | 0.14                               | 1.04                         | 0.04                               |
| Services                              | 1.02                         | 0.02                               | 1.08                         | 0.07                               |
| Government and Government Enterprises | 0.63                         | -0.59                              | 0.70                         | -0.44                              |
| Federal, Civilian                     | 0.73                         | -0.36                              | 0.68                         | -0.47                              |
| Military                              | 0.25                         | -3.06                              | 0.21                         | -3.72                              |
| State and Local                       | 0.73                         | -0.38                              | 0.80                         | -0.25                              |

Table 6G : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
 - Cuyahoga, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.02                         | -44.64                             | 0.03                         | -30.07                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.15                         | 0.13                               | 1.08                         | 0.08                               |
| Ag.Serv., For., Fish., and Other      | 0.36                         | -1.78                              | 0.41                         | -1.42                              |
| Mining                                | 0.19                         | -4.40                              | 0.16                         | -5.41                              |
| Construction                          | 0.98                         | -0.02                              | 0.65                         | -0.53                              |
| Manufacturing                         | 1.41                         | 0.29                               | 1.29                         | 0.22                               |
| Transportation and Public Utilities   | 1.15                         | 0.13                               | 1.03                         | 0.03                               |
| Wholesale Trade                       | 1.45                         | 0.31                               | 1.41                         | 0.29                               |
| Retail Trade                          | 0.99                         | -0.01                              | 0.98                         | -0.02                              |
| Finance, Insurance and Real Estate    | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Services                              | 1.00                         | 0.00                               | 1.13                         | 0.11                               |
| Government and Government Enterprises | 0.64                         | -0.57                              | 0.77                         | -0.29                              |
| Federal, Civilian                     | 0.74                         | -0.35                              | 0.91                         | -0.09                              |
| Military                              | 0.27                         | -2.72                              | 0.25                         | -2.99                              |
| State and Local                       | 0.73                         | -0.37                              | 0.85                         | -0.18                              |

Table 6H : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Columbus Central City County - Franklin, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.08                         | -11.37                             | 0.07                         | -12.69                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.05                         | 0.05                               | 1.02                         | 0.02                               |
| Ag.Serv., For., Fish., and Other      | 0.46                         | -1.17                              | 0.77                         | -0.30                              |
| Mining                                | 0.26                         | -2.90                              | 0.26                         | -2.89                              |
| Construction                          | 1.20                         | 0.17                               | 0.80                         | -0.25                              |
| Manufacturing                         | 0.96                         | -0.04                              | 0.77                         | -0.30                              |
| Transportation and Public Utilities   | 1.03                         | 0.03                               | 0.95                         | -0.05                              |
| Wholesale Trade                       | 1.06                         | 0.06                               | 1.08                         | 0.07                               |
| Retail Trade                          | 1.14                         | 0.13                               | 1.15                         | 0.13                               |
| Finance, Insurance and Real Estate    | 1.47                         | 0.32                               | 1.47                         | 0.32                               |
| Services                              | 1.00                         | 0.00                               | 1.07                         | 0.07                               |
| Government and Government Enterprises | 1.02                         | 0.02                               | 1.07                         | 0.07                               |
| Federal, Civilian                     | 0.97                         | -0.03                              | 0.82                         | -0.22                              |
| Military                              | 0.70                         | -0.43                              | 0.26                         | -2.89                              |
| State and Local                       | 1.14                         | 0.12                               | 1.29                         | 0.23                               |

| Table 6I : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,<br>Dallas Central City, 1969 and 1984 |                              |                                    |                              |                                    |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
|                                                                                                                         | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
| Farm                                                                                                                    | 0.05                         | -17.83                             | 0.03                         | -31.38                             |
| Non-farm                                                                                                                | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                                                                                                                 | 1.17                         | 0.14                               | 1.13                         | 0.11                               |
| Ag.Serv., For., Fish., and Other                                                                                        | 0.41                         | -1.45                              | 0.45                         | -1.20                              |
| Mining                                                                                                                  | 1.65                         | 0.40                               | 2.47                         | 0.59                               |
| Construction                                                                                                            | 1.27                         | 0.21                               | 1.31                         | 0.24                               |
| Manufacturing                                                                                                           | 0.97                         | -0.03                              | 0.91                         | -0.10                              |
| Transportation and Public Utilities                                                                                     | 1.32                         | 0.24                               | 1.27                         | 0.21                               |
| Wholesale Trade                                                                                                         | 2.03                         | 0.51                               | 1.73                         | 0.42                               |
| Retail Trade                                                                                                            | 1.04                         | 0.04                               | 1.00                         | 0.00                               |
| Finance, Insurance and Real Estate                                                                                      | 1.64                         | 0.39                               | 1.54                         | 0.35                               |
| Services                                                                                                                | 1.09                         | 0.09                               | 1.02                         | 0.02                               |
| Government and Government Enterprises                                                                                   | 0.54                         | -0.86                              | 0.55                         | -0.83                              |
| Federal, Civilian                                                                                                       | 0.55                         | -0.81                              | 0.69                         | -0.44                              |
| Military                                                                                                                | 0.29                         | -2.48                              | 0.27                         | -2.76                              |
| State and Local                                                                                                         | 0.62                         | -0.62                              | 0.57                         | -0.75                              |



Table 6J : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Denver Central City County, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.02                         | -64.99                             | 0.02                         | -63.51                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.07                         | 0.06                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 0.53                         | -0.87                              | 0.48                         | -1.08                              |
| Mining                                | 1.96                         | 0.49                               | 3.46                         | 0.71                               |
| Construction                          | 0.92                         | -0.08                              | 0.93                         | -0.08                              |
| Manufacturing                         | 0.61                         | -0.65                              | 0.48                         | -1.10                              |
| Transportation and Public Utilities   | 1.67                         | 0.40                               | 1.82                         | 0.45                               |
| Wholesale Trade                       | 1.97                         | 0.49                               | 1.62                         | 0.38                               |
| Retail Trade                          | 1.04                         | 0.04                               | 0.78                         | -0.29                              |
| Finance, Insurance and Real Estate    | 1.50                         | 0.33                               | 1.50                         | 0.33                               |
| Services                              | 1.17                         | 0.14                               | 1.19                         | 0.16                               |
| Government and Government Enterprises | 0.97                         | -0.03                              | 0.90                         | -0.11                              |
| Federal, Civilian                     | 1.39                         | 0.28                               | 1.26                         | 0.20                               |
| Military                              | 1.06                         | 0.05                               | 1.01                         | 0.01                               |
| State and Local                       | 0.82                         | -0.22                              | 0.80                         | -0.25                              |

Table 6K : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Detroit Central City County - Wayne, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.02                         | -56.27                             | 0.03                         | -35.31                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.14                         | 0.12                               | 1.07                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 0.26                         | -2.83                              | 0.27                         | -2.69                              |
| Mining                                | 0.06                         | -15.63                             | 0.07                         | -14.37                             |
| Construction                          | 0.74                         | -0.35                              | 0.49                         | -1.05                              |
| Manufacturing                         | 1.48                         | 0.32                               | 1.54                         | 0.35                               |
| Transportation and Public Utilities   | 1.11                         | 0.10                               | 1.08                         | 0.07                               |
| Wholesale Trade                       | 1.27                         | 0.21                               | 1.03                         | 0.03                               |
| Retail Trade                          | 1.00                         | 0.00                               | 0.93                         | -0.08                              |
| Finance, Insurance and Real Estate    | 1.16                         | 0.14                               | 0.87                         | -0.15                              |
| Services                              | 0.98                         | -0.02                              | 1.09                         | 0.08                               |
| Government and Government Enterprises | 0.66                         | -0.51                              | 0.86                         | -0.16                              |
| Federal, Civilian                     | 0.52                         | -0.91                              | 0.70                         | -0.42                              |
| Military                              | 0.29                         | -2.45                              | 0.25                         | -2.96                              |
| State and Local                       | 0.83                         | -0.21                              | 1.02                         | 0.02                               |

Table 6L : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
El Paso Central City County, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.28                         | -2.51                              | 0.15                         | -5.89                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 0.80                         | -0.24                              | 0.92                         | -0.09                              |
| Ag.Serv., For., Fish., and Other      | 0.27                         | -2.69                              | 0.41                         | -1.45                              |
| Mining                                | 0.17                         | -4.78                              | 0.35                         | -1.83                              |
| Construction                          | 0.88                         | -0.13                              | 1.02                         | 0.02                               |
| Manufacturing                         | 0.64                         | -0.57                              | 1.00                         | 0.00                               |
| Transportation and Public Utilities   | 1.08                         | 0.07                               | 1.05                         | 0.05                               |
| Wholesale Trade                       | 0.98                         | -0.02                              | 0.96                         | -0.04                              |
| Retail Trade                          | 0.96                         | -0.05                              | 0.99                         | -0.01                              |
| Finance, Insurance and Real Estate    | 0.76                         | -0.32                              | 0.91                         | -0.09                              |
| Services                              | 0.80                         | -0.25                              | 0.81                         | -0.24                              |
| Government and Government Enterprises | 2.05                         | 0.51                               | 1.58                         | 0.37                               |
| Federal, Civilian                     | 1.87                         | 0.46                               | 1.60                         | 0.38                               |
| Military                              | 5.65                         | 0.82                               | 3.94                         | 0.75                               |
| State and Local                       | 0.89                         | -0.13                              | 1.09                         | 0.08                               |

Table 6M : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Fort Worth Central City County - Tarrant, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.15                         | -5.88                              | 0.08                         | -11.36                             |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.11                         | 0.10                               | 1.09                         | 0.08                               |
| Ag.Serv., For., Fish., and Other      | 0.40                         | -1.52                              | 0.51                         | -0.96                              |
| Mining                                | 1.30                         | 0.23                               | 1.78                         | 0.44                               |
| Construction                          | 1.05                         | 0.05                               | 1.37                         | 0.27                               |
| Manufacturing                         | 1.28                         | 0.22                               | 1.16                         | 0.14                               |
| Transportation and Public Utilities   | 0.90                         | -0.11                              | 1.01                         | 0.01                               |
| Wholesale Trade                       | 1.17                         | 0.15                               | 1.09                         | 0.08                               |
| Retail Trade                          | 1.10                         | 0.09                               | 1.22                         | 0.18                               |
| Finance, Insurance and Real Estate    | 0.96                         | -0.04                              | 0.98                         | -0.02                              |
| Services                              | 1.03                         | 0.03                               | 0.94                         | -0.07                              |
| Government and Government Enterprises | 0.74                         | -0.34                              | 0.73                         | -0.36                              |
| Federal, Civilian                     | 0.99                         | -0.01                              | 0.88                         | -0.13                              |
| Military                              | 0.63                         | -0.58                              | 0.72                         | -0.39                              |
| State and Local                       | 0.71                         | -0.41                              | 0.70                         | -0.42                              |



Table 6N : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Houston Central City County - Harris, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.08                         | -11.11                             | 0.05                         | -20.55                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.14                         | 0.13                               | 1.11                         | 0.10                               |
| Ag.Serv., For., Fish., and Other      | 0.55                         | -0.83                              | 0.58                         | -0.73                              |
| Mining                                | 4.19                         | 0.76                               | 5.82                         | 0.83                               |
| Construction                          | 1.73                         | 0.42                               | 1.69                         | 0.41                               |
| Manufacturing                         | 0.72                         | -0.38                              | 0.62                         | -0.62                              |
| Transportation and Public Utilities   | 1.42                         | 0.29                               | 1.34                         | 0.25                               |
| Wholesale Trade                       | 1.84                         | 0.46                               | 1.44                         | 0.30                               |
| Retail Trade                          | 1.05                         | 0.05                               | 1.00                         | 0.00                               |
| Finance, Insurance and Real Estate    | 1.19                         | 0.16                               | 1.22                         | 0.18                               |
| Services                              | 1.21                         | 0.17                               | 1.06                         | 0.06                               |
| Government and Government Enterprises | 0.63                         | -0.58                              | 0.64                         | -0.56                              |
| Federal, Civilian                     | 0.65                         | -0.54                              | 0.53                         | -0.88                              |
| Military                              | 0.31                         | -2.21                              | 0.28                         | -2.51                              |
| State and Local                       | 0.73                         | -0.36                              | 0.74                         | -0.35                              |

Table 60 : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Indianapolis Central City County - Marion, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.05                         | -19.18                             | 0.05                         | -17.95                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.10                         | 0.09                               | 1.05                         | 0.04                               |
| Ag.Serv., For., Fish., and Other      | 0.25                         | -3.02                              | 0.43                         | -1.35                              |
| Mining                                | 0.18                         | -4.64                              | 0.25                         | -3.08                              |
| Construction                          | 1.08                         | 0.08                               | 0.86                         | -0.16                              |
| Manufacturing                         | 1.20                         | 0.17                               | 1.08                         | 0.07                               |
| Transportation and Public Utilities   | 1.14                         | 0.13                               | 1.09                         | 0.08                               |
| Wholesale Trade                       | 1.43                         | 0.30                               | 1.26                         | 0.21                               |
| Retail Trade                          | 1.01                         | 0.01                               | 1.04                         | 0.04                               |
| Finance, Insurance and Real Estate    | 1.50                         | 0.33                               | 1.25                         | 0.20                               |
| Services                              | 0.90                         | -0.11                              | 1.01                         | 0.01                               |
| Government and Government Enterprises | 0.84                         | -0.19                              | 0.95                         | -0.05                              |
| Federal, Civilian                     | 1.16                         | 0.14                               | 1.30                         | 0.23                               |
| Military                              | 0.49                         | -1.06                              | 0.64                         | -0.56                              |
| State and Local                       | 0.86                         | -0.16                              | 0.94                         | -0.06                              |

Table 6P : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Jacksonville Central City County - Duval, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.08                         | -11.43                             | 0.07                         | -13.26                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 0.97                         | -0.03                              | 0.97                         | -0.03                              |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.89                         | -0.12                              |
| Mining                                | 0.00                         | ERR                                | 0.05                         | -17.59                             |
| Construction                          | 1.26                         | 0.20                               | 1.37                         | 0.27                               |
| Manufacturing                         | 0.00                         | ERR                                | 0.50                         | -1.00                              |
| Transportation and Public Utilities   | 1.51                         | 0.34                               | 1.54                         | 0.35                               |
| Wholesale Trade                       | 1.73                         | 0.42                               | 1.31                         | 0.24                               |
| Retail Trade                          | 1.06                         | 0.06                               | 1.00                         | 0.00                               |
| Finance, Insurance and Real Estate    | 1.56                         | 0.36                               | 1.39                         | 0.28                               |
| Services                              | 1.04                         | 0.04                               | 0.94                         | -0.06                              |
| Government and Government Enterprises | 1.36                         | 0.27                               | 1.32                         | 0.24                               |
| Federal, Civilian                     | 1.58                         | 0.37                               | 1.57                         | 0.36                               |
| Military                              | 2.96                         | 0.66                               | 4.04                         | 0.75                               |
| State and Local                       | 0.76                         | -0.32                              | 0.71                         | -0.41                              |

Table 6R : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Los Angeles Central City County, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.05                         | -20.98                             | 0.05                         | -18.11                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.12                         | 0.10                               | 1.09                         | 0.09                               |
| Ag.Serv., For., Fish., and Other      | 0.87                         | -0.15                              | 0.99                         | -0.01                              |
| Mining                                | 0.47                         | -1.12                              | 0.34                         | -1.95                              |
| Construction                          | 0.77                         | -0.30                              | 0.64                         | -0.57                              |
| Manufacturing                         | 1.17                         | 0.14                               | 1.23                         | 0.18                               |
| Transportation and Public Utilities   | 1.02                         | 0.02                               | 1.01                         | 0.01                               |
| Wholesale Trade                       | 1.33                         | 0.25                               | 1.34                         | 0.25                               |
| Retail Trade                          | 1.02                         | 0.02                               | 0.93                         | -0.08                              |
| Finance, Insurance and Real Estate    | 1.25                         | 0.20                               | 1.15                         | 0.13                               |
| Services                              | 1.20                         | 0.16                               | 1.19                         | 0.16                               |
| Government and Government Enterprises | 0.76                         | -0.31                              | 0.71                         | -0.40                              |
| Federal, Civilian                     | 0.65                         | -0.54                              | 0.63                         | -0.60                              |
| Military                              | 0.55                         | -0.83                              | 0.40                         | -1.50                              |
| State and Local                       | 0.87                         | -0.15                              | 0.80                         | -0.25                              |



Table 6Q : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Kansas City Central Counties - Clay, Jackson and Platte, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.24                         | -3.13                              | 0.22                         | -3.48                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.12                         | 0.11                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 0.27                         | -2.64                              | 0.40                         | -1.53                              |
| Mining                                | 0.09                         | -9.54                              | 0.15                         | -5.85                              |
| Construction                          | 0.91                         | -0.09                              | 0.86                         | -0.16                              |
| Manufacturing                         | 0.96                         | -0.04                              | 0.94                         | -0.06                              |
| Transportation and Public Utilities   | 1.79                         | 0.44                               | 1.55                         | 0.36                               |
| Wholesale Trade                       | 1.75                         | 0.43                               | 1.25                         | 0.20                               |
| Retail Trade                          | 1.06                         | 0.06                               | 1.03                         | 0.03                               |
| Finance, Insurance and Real Estate    | 1.40                         | 0.29                               | 1.17                         | 0.15                               |
| Services                              | 1.04                         | 0.04                               | 1.10                         | 0.09                               |
| Government and Government Enterprises | 0.70                         | -0.43                              | 0.85                         | -0.18                              |
| Federal, Civilian                     | 1.36                         | 0.26                               | 1.66                         | 0.40                               |
| Military                              | 0.34                         | -1.93                              | 0.56                         | -0.79                              |
| State and Local                       | 0.62                         | -0.61                              | 0.72                         | -0.38                              |

Table 6S : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Memphis Central City County - Shelby, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.16                         | -5.21                              | 0.16                         | -5.28                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.02                         | 0.02                               | 1.02                         | 0.02                               |
| Ag.Serv., For., Fish., and Other      | 0.37                         | -1.68                              | 0.47                         | -1.14                              |
| Mining                                | 0.11                         | -8.14                              | 0.13                         | -6.99                              |
| Construction                          | 0.99                         | -0.01                              | 0.94                         | -0.07                              |
| Manufacturing                         | 0.83                         | -0.20                              | 0.71                         | -0.40                              |
| Transportation and Public Utilities   | 1.21                         | 0.17                               | 1.47                         | 0.32                               |
| Wholesale Trade                       | 2.01                         | 0.50                               | 1.61                         | 0.38                               |
| Retail Trade                          | 0.94                         | -0.07                              | 1.05                         | 0.05                               |
| Finance, Insurance and Real Estate    | 0.99                         | -0.01                              | 1.04                         | 0.04                               |
| Services                              | 1.11                         | 0.10                               | 1.06                         | 0.06                               |
| Government and Government Enterprises | 1.13                         | 0.11                               | 1.08                         | 0.07                               |
| Federal, Civilian                     | 1.18                         | 0.16                               | 1.51                         | 0.34                               |
| Military                              | 1.60                         | 0.38                               | 1.47                         | 0.32                               |
| State and Local                       | 0.95                         | -0.05                              | 0.90                         | -0.12                              |

Table 6T : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Milwaukee Central City County, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.03                         | -29.84                             | 0.02                         | -47.81                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.15                         | 0.13                               | 1.10                         | 0.09                               |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.24                         | -3.23                              |
| Mining                                | 0.00                         | ERR                                | 0.09                         | -9.62                              |
| Construction                          | 0.77                         | -0.29                              | 0.57                         | -0.77                              |
| Manufacturing                         | 1.45                         | 0.31                               | 1.33                         | 0.25                               |
| Transportation and Public Utilities   | 1.05                         | 0.05                               | 1.02                         | 0.02                               |
| Wholesale Trade                       | 1.24                         | 0.19                               | 1.05                         | 0.04                               |
| Retail Trade                          | 1.11                         | 0.10                               | 0.98                         | -0.02                              |
| Finance, Insurance and Real Estate    | 1.14                         | 0.12                               | 1.21                         | 0.17                               |
| Services                              | 0.98                         | -0.02                              | 1.19                         | 0.16                               |
| Government and Government Enterprises | 0.62                         | -0.61                              | 0.71                         | -0.41                              |
| Federal, Civilian                     | 0.58                         | -0.72                              | 0.63                         | -0.59                              |
| Military                              | 0.34                         | -1.95                              | 0.53                         | -0.88                              |
| State and Local                       | 0.73                         | -0.37                              | 0.77                         | -0.31                              |

Table 6U : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Minneapolis-St. Paul Central City Counties - Hennepin and Ramsey, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.06                         | -16.07                             | 0.05                         | -17.59                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.12                         | 0.11                               | 1.09                         | 0.09                               |
| Ag.Serv., For., Fish., and Other      | 0.34                         | -1.94                              | 0.39                         | -1.59                              |
| Mining                                | 0.07                         | -13.81                             | 0.08                         | -11.21                             |
| Construction                          | 1.04                         | 0.04                               | 0.76                         | -0.32                              |
| Manufacturing                         | 1.08                         | 0.07                               | 1.17                         | 0.14                               |
| Transportation and Public Utilities   | 1.27                         | 0.21                               | 1.14                         | 0.12                               |
| Wholesale Trade                       | 1.66                         | 0.40                               | 1.11                         | 0.10                               |
| Retail Trade                          | 1.10                         | 0.09                               | 1.01                         | 0.01                               |
| Finance, Insurance and Real Estate    | 1.35                         | 0.26                               | 1.27                         | 0.21                               |
| Services                              | 1.05                         | 0.05                               | 1.13                         | 0.12                               |
| Government and Government Enterprises | 0.72                         | -0.38                              | 0.71                         | -0.41                              |
| Federal, Civilian                     | 0.73                         | -0.37                              | 0.64                         | -0.56                              |
| Military                              | 0.38                         | -1.64                              | 0.28                         | -2.60                              |
| State and Local                       | 0.84                         | -0.19                              | 0.81                         | -0.23                              |



Table 6V : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Nashville Central City County - Davidson, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.14                         | -6.38                              | 0.09                         | -9.97                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.08                         | 0.07                               |
| Ag.Serv., For., Fish., and Other      | 0.48                         | -1.09                              | 0.41                         | -1.43                              |
| Mining                                | 0.11                         | -8.20                              | 0.22                         | -3.58                              |
| Construction                          | 1.31                         | 0.24                               | 1.12                         | 0.10                               |
| Manufacturing                         | 0.89                         | -0.12                              | 0.81                         | -0.24                              |
| Transportation and Public Utilities   | 0.98                         | -0.02                              | 1.32                         | 0.24                               |
| Wholesale Trade                       | 1.66                         | 0.40                               | 1.41                         | 0.29                               |
| Retail Trade                          | 0.89                         | -0.13                              | 1.11                         | 0.10                               |
| Finance, Insurance and Real Estate    | 1.59                         | 0.37                               | 1.15                         | 0.13                               |
| Services                              | 1.25                         | 0.20                               | 1.17                         | 0.15                               |
| Government and Government Enterprises | 0.85                         | -0.17                              | 0.78                         | -0.28                              |
| Federal, Civilian                     | 0.71                         | -0.40                              | 0.77                         | -0.31                              |
| Military                              | 0.43                         | -1.32                              | 0.30                         | -2.28                              |
| State and Local                       | 1.03                         | 0.03                               | 0.88                         | -0.14                              |

Table 6W : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
New Orleans Central City County - Orleans, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.03                         | 0.02                               |
| Ag.Serv.,For.,Fish.,and Other         | 0.44                         | -1.25                              | 0.26                         | -2.90                              |
| Mining                                | 3.40                         | 0.71                               | 4.26                         | 0.77                               |
| Construction                          | 1.05                         | 0.05                               | 0.77                         | -0.30                              |
| Manufacturing                         | 0.42                         | -1.37                              | 0.37                         | -1.72                              |
| Transportation and Public Utilities   | 2.17                         | 0.54                               | 1.84                         | 0.46                               |
| Wholesale Trade                       | 1.69                         | 0.41                               | 1.02                         | 0.02                               |
| Retail Trade                          | 0.96                         | -0.04                              | 0.86                         | -0.16                              |
| Finance, Insurance and Real Estate    | 1.34                         | 0.25                               | 1.09                         | 0.08                               |
| Services                              | 1.42                         | 0.30                               | 1.35                         | 0.26                               |
| Government and Government Enterprises | 0.90                         | -0.11                              | 1.07                         | 0.07                               |
| Federal, Civilian                     | 1.13                         | 0.12                               | 1.42                         | 0.29                               |
| Military                              | 0.35                         | -1.90                              | 0.72                         | -0.39                              |
| State and Local                       | 1.01                         | 0.01                               | 1.07                         | 0.06                               |

Table 6X : Employment Location Quotient, Export(+) and Import(-) Roles by Sector, 1969 and 1984  
New York City Counties - Bronx, Kings, New York, Queens, and Richmond,

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.12                         | 0.10                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 0.24                         | -3.13                              | 0.16                         | -5.06                              |
| Mining                                | 0.08                         | -11.35                             | 0.10                         | -8.70                              |
| Construction                          | 0.49                         | -1.04                              | 0.56                         | -0.77                              |
| Manufacturing                         | 0.86                         | -0.17                              | 0.68                         | -0.46                              |
| Transportation and Public Utilities   | 1.40                         | 0.28                               | 1.39                         | 0.28                               |
| Wholesale Trade                       | 1.71                         | 0.42                               | 1.39                         | 0.28                               |
| Retail Trade                          | 0.81                         | -0.23                              | 0.68                         | -0.47                              |
| Finance, Insurance and Real Estate    | 2.28                         | 0.56                               | 1.98                         | 0.50                               |
| Services                              | 1.32                         | 0.24                               | 1.36                         | 0.26                               |
| Government and Government Enterprises | 0.77                         | -0.30                              | 0.89                         | -0.13                              |
| Federal, Civilian                     | 0.78                         | -0.29                              | 0.79                         | -0.26                              |
| Military                              | 0.30                         | -2.37                              | 0.23                         | -3.36                              |
| State and Local                       | 0.93                         | -0.08                              | 1.04                         | 0.04                               |

Table 6Y : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Oklahoma City Central County, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.12                         | -7.45                              | 0.09                         | -10.06                             |
| Non-farm                              | 1.05                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 0.94                         | -0.06                              | 0.99                         | -0.01                              |
| Ag.Serv., For., Fish., and Other      | 0.40                         | -1.48                              | 0.39                         | -1.58                              |
| Mining                                | 3.62                         | 0.72                               | 6.35                         | 0.84                               |
| Construction                          | 1.10                         | 0.09                               | 0.99                         | -0.01                              |
| Manufacturing                         | 0.54                         | -0.86                              | 0.64                         | -0.57                              |
| Transportation and Public Utilities   | 1.15                         | 0.13                               | 1.05                         | 0.05                               |
| Wholesale Trade                       | 1.31                         | 0.24                               | 1.12                         | 0.11                               |
| Retail Trade                          | 1.03                         | 0.03                               | 1.01                         | 0.01                               |
| Finance, Insurance and Real Estate    | 1.28                         | 0.22                               | 1.18                         | 0.15                               |
| Services                              | 0.98                         | -0.02                              | 0.91                         | -0.10                              |
| Government and Government Enterprises | 1.51                         | 0.34                               | 1.23                         | 0.19                               |
| Federal, Civilian                     | 3.99                         | 0.75                               | 2.52                         | 0.60                               |
| Military                              | 0.82                         | -0.23                              | 1.17                         | 0.14                               |
| State and Local                       | 1.00                         | 0.00                               | 0.95                         | -0.05                              |



Table 6Z : Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Philadelphia Central City County, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | -2109.40                           | 0.00                         | -1169.75                           |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.09                         | 0.08                               | 1.01                         | 0.01                               |
| Ag.Serv., For., Fish., and Other      | 0.15                         | -5.54                              | 0.13                         | -6.99                              |
| Mining                                | 0.01                         | -82.74                             | 0.03                         | -30.84                             |
| Construction                          | 0.79                         | -0.27                              | 0.51                         | -0.96                              |
| Manufacturing                         | 1.07                         | 0.07                               | 0.78                         | -0.28                              |
| Transportation and Public Utilities   | 1.24                         | 0.19                               | 1.19                         | 0.16                               |
| Wholesale Trade                       | 1.44                         | 0.30                               | 1.12                         | 0.11                               |
| Retail Trade                          | 0.92                         | -0.08                              | 0.83                         | -0.20                              |
| Finance, Insurance and Real Estate    | 1.40                         | 0.29                               | 1.25                         | 0.20                               |
| Services                              | 1.20                         | 0.17                               | 1.32                         | 0.24                               |
| Government and Government Enterprises | 0.88                         | -0.14                              | 1.17                         | 0.15                               |
| Federal, Civilian                     | 2.02                         | 0.50                               | 2.55                         | 0.61                               |
| Military                              | 0.47                         | -1.12                              | 0.87                         | -0.15                              |
| State and Local                       | 0.67                         | -0.49                              | 0.93                         | -0.08                              |

Notes: "0" and "ERR" indicate that data are undisclosed.

The location quotient is  $(E_{ij}/E_j)/(E_i/E)$  where

$E_{ij}$  = Employment in i sector in j central city county

$E_j$  = Total employment in j central city county

$E_i$  = Employment in i sector in the nation

$E$  = Total employment in the nation

The net import/net export concept is based on the location quotient (LQ) and is equal to  $(1 - (1/LQ))$

U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

Table 6AA: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Phoenix Central City County - Maricopa, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.51                         | -0.97                              | 0.31                         | -2.20                              |
| Non-farm                              | 1.03                         | 0.02                               | 1.02                         | 0.02                               |
| Private                               | 1.04                         | 0.04                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and other      | 1.44                         | 0.31                               | 1.43                         | 0.30                               |
| Mining                                | 0.10                         | -9.10                              | 0.23                         | -3.42                              |
| Construction                          | 1.17                         | 0.15                               | 1.66                         | 0.40                               |
| Manufacturing                         | 0.84                         | -0.19                              | 0.83                         | -0.20                              |
| Transportation and Public Utilities   | 0.88                         | -0.13                              | 0.84                         | -0.19                              |
| Wholesale Trade                       | 1.10                         | 0.09                               | 1.03                         | 0.03                               |
| Retail Trade                          | 1.18                         | 0.15                               | 1.10                         | 0.09                               |
| Finance, Insurance and Real Estate    | 1.35                         | 0.26                               | 1.37                         | 0.27                               |
| Services                              | 1.11                         | 0.10                               | 1.06                         | 0.05                               |
| Government and Government Enterprises | 0.97                         | -0.03                              | 0.82                         | -0.22                              |
| Federal, Civilian                     | 0.77                         | -0.30                              | 0.66                         | -0.51                              |
| Military                              | 0.96                         | -0.04                              | 0.76                         | -0.32                              |
| State and Local                       | 1.04                         | 0.04                               | 0.87                         | -0.15                              |

Table 6AB: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Pittsburgh Central City County - Allegheny, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.03                         | -34.30                             | 0.04                         | -24.62                             |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.13                         | 0.12                               | 1.09                         | 0.08                               |
| Ag.Serv., For., Fish., and Other      | 0.35                         | -1.90                              | 0.42                         | -1.38                              |
| Mining                                | 0.55                         | -0.81                              | 0.41                         | -1.44                              |
| Construction                          | 1.10                         | 0.09                               | 1.04                         | 0.03                               |
| Manufacturing                         | 1.12                         | 0.11                               | 0.85                         | -0.18                              |
| Transportation and Public Utilities   | 1.22                         | 0.18                               | 1.03                         | 0.03                               |
| Wholesale Trade                       | 1.26                         | 0.20                               | 1.12                         | 0.11                               |
| Retail Trade                          | 1.06                         | 0.06                               | 1.12                         | 0.11                               |
| Finance, Insurance and Real Estate    | 1.03                         | 0.03                               | 1.08                         | 0.07                               |
| Services                              | 1.23                         | 0.19                               | 1.32                         | 0.24                               |
| Government and Government Enterprises | 0.70                         | -0.44                              | 0.73                         | -0.37                              |
| Federal, Civilian                     | 0.64                         | -0.57                              | 0.83                         | -0.21                              |
| Military                              | 0.34                         | -1.96                              | 0.48                         | -1.10                              |
| State and Local                       | 0.83                         | -0.20                              | 0.76                         | -0.32                              |



Table 6AC: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
San Antonio Central City County - Bexar, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.18                         | -4.47                              | 0.16                         | -5.43                              |
| Non-farm                              | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                               | 0.77                         | -0.30                              | 0.92                         | -0.09                              |
| Ag.Serv., For., Fish., and Other      | 0.31                         | -2.19                              | 0.45                         | -1.22                              |
| Mining                                | 0.76                         | -0.31                              | 1.10                         | 0.09                               |
| Construction                          | 1.00                         | 0.00                               | 1.44                         | 0.31                               |
| Manufacturing                         | 0.39                         | -1.57                              | 0.49                         | -1.04                              |
| Transportation and Public Utilities   | 0.59                         | -0.69                              | 0.74                         | -0.36                              |
| Wholesale Trade                       | 1.05                         | 0.04                               | 0.94                         | -0.06                              |
| Retail Trade                          | 0.97                         | -0.03                              | 1.11                         | 0.10                               |
| Finance, Insurance and Real Estate    | 1.04                         | 0.04                               | 1.17                         | 0.15                               |
| Services                              | 0.95                         | -0.06                              | 0.95                         | -0.05                              |
| Government and Government Enterprises | 2.22                         | 0.55                               | 1.58                         | 0.37                               |
| Federal, Civilian                     | 3.80                         | 0.74                               | 2.77                         | 0.64                               |
| Military                              | 4.85                         | 0.79                               | 3.39                         | 0.70                               |
| State and Local                       | 0.85                         | -0.17                              | 0.94                         | -0.07                              |

| Table 6AD: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,<br>San Diego Central City County, 1969 and 1984 |                              |                                    |                              |                                    |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
|                                                                                                                                   | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
| Farm                                                                                                                              | 0.36                         | -1.81                              | 0.40                         | -1.50                              |
| Non-farm                                                                                                                          | 1.03                         | 0.03                               | 1.02                         | 0.02                               |
| Private                                                                                                                           | 0.73                         | -0.37                              | 0.89                         | -0.12                              |
| Ag.Serv., For., Fish., and Other                                                                                                  | 1.29                         | 0.23                               | 1.63                         | 0.39                               |
| Mining                                                                                                                            | 0.00                         | ERR                                | 0.16                         | -5.20                              |
| Construction                                                                                                                      | 0.00                         | ERR                                | 1.01                         | 0.01                               |
| Manufacturing                                                                                                                     | 0.50                         | -1.01                              | 0.67                         | -0.49                              |
| Transportation and Public Utilities                                                                                               | 0.61                         | -0.65                              | 0.66                         | -0.52                              |
| Wholesale Trade                                                                                                                   | 0.54                         | -0.85                              | 0.66                         | -0.51                              |
| Retail Trade                                                                                                                      | 0.89                         | -0.12                              | 0.96                         | -0.04                              |
| Finance, Insurance and Real Estate                                                                                                | 0.89                         | -0.12                              | 1.12                         | 0.11                               |
| Services                                                                                                                          | 0.92                         | -0.09                              | 1.02                         | 0.02                               |
| Government and Government Enterprises                                                                                             | 2.34                         | 0.57                               | 1.65                         | 0.39                               |
| Federal, Civilian                                                                                                                 | 2.04                         | 0.51                               | 1.60                         | 0.37                               |
| Military                                                                                                                          | 6.98                         | 0.86                               | 5.71                         | 0.82                               |
| State and Local                                                                                                                   | 0.87                         | -0.15                              | 0.84                         | -0.19                              |

Table 6AE: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
San Francisco Central City County, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | -564.40                            | 0.00                         | ERR                                |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.04                         | 0.04                               | 1.05                         | 0.05                               |
| Ag.Serv., For., Fish., and other      | 0.52                         | -0.91                              | 0.41                         | -1.42                              |
| Mining                                | 0.13                         | -6.84                              | 0.38                         | -1.64                              |
| Construction                          | 0.76                         | -0.32                              | 0.48                         | -1.08                              |
| Manufacturing                         | 0.44                         | -1.25                              | 0.44                         | -1.26                              |
| Transportation and Public Utilities   | 2.01                         | 0.50                               | 1.63                         | 0.39                               |
| Wholesale Trade                       | 1.68                         | 0.40                               | 1.11                         | 0.10                               |
| Retail Trade                          | 0.80                         | -0.24                              | 0.79                         | -0.27                              |
| Finance, Insurance and Real Estate    | 2.42                         | 0.59                               | 2.09                         | 0.52                               |
| Services                              | 1.29                         | 0.23                               | 1.40                         | 0.29                               |
| Government and Government Enterprises | 1.09                         | 0.08                               | 0.93                         | -0.08                              |
| Federal, Civilian                     | 2.31                         | 0.57                               | 1.78                         | 0.44                               |
| Military                              | 0.97                         | -0.03                              | 0.61                         | -0.64                              |
| State and Local                       | 0.76                         | -0.31                              | 0.80                         | -0.25                              |

| Table 6AF: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,<br>San Jose Central City County - Santa Clara, 1969 and 1984 |                              |                                    |                              |                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
|                                                                                                                                                | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
| Farm                                                                                                                                           | 0.30                         | -2.34                              | 0.17                         | -4.92                              |
| Non-farm                                                                                                                                       | 1.04                         | 0.04                               | 1.03                         | 0.03                               |
| Private                                                                                                                                        | 1.09                         | 0.08                               | 1.11                         | 0.10                               |
| Ag.Serv., For., Fish., and Other                                                                                                               | 1.13                         | 0.11                               | 1.00                         | 0.00                               |
| Mining                                                                                                                                         | 0.07                         | -13.04                             | 0.09                         | -10.25                             |
| Construction                                                                                                                                   | 1.00                         | 0.00                               | 0.79                         | -0.26                              |
| Manufacturing                                                                                                                                  | 1.29                         | 0.22                               | 1.93                         | 0.48                               |
| Transportation and Public Utilities                                                                                                            | 0.75                         | -0.34                              | 0.55                         | -0.83                              |
| Wholesale Trade                                                                                                                                | 0.76                         | -0.32                              | 0.83                         | -0.20                              |
| Retail Trade                                                                                                                                   | 0.97                         | -0.03                              | 0.80                         | -0.25                              |
| Finance, Insurance and Real Estate                                                                                                             | 0.96                         | -0.04                              | 0.80                         | -0.24                              |
| Services                                                                                                                                       | 1.22                         | 0.18                               | 1.12                         | 0.11                               |
| Government and Government Enterprises                                                                                                          | 0.81                         | -0.23                              | 0.61                         | -0.63                              |
| Federal, Civilian                                                                                                                              | 0.65                         | -0.53                              | 0.53                         | -0.89                              |
| Military                                                                                                                                       | 0.67                         | -0.49                              | 0.53                         | -0.90                              |
| State and Local                                                                                                                                | 0.91                         | -0.10                              | 0.65                         | -0.54                              |



Table 6AG: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
Seattle Central City County - King, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.09                         | -10.38                             | 0.11                         | -8.08                              |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.08                         | 0.07                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 1.05                         | 0.05                               | 1.20                         | 0.17                               |
| Mining                                | 0.09                         | -10.58                             | 0.11                         | -7.87                              |
| Construction                          | 1.05                         | 0.05                               | 0.97                         | -0.03                              |
| Manufacturing                         | 0.98                         | -0.02                              | 0.92                         | -0.08                              |
| Transportation and Public Utilities   | 1.24                         | 0.19                               | 1.26                         | 0.20                               |
| Wholesale Trade                       | 1.47                         | 0.32                               | 1.35                         | 0.26                               |
| Retail Trade                          | 1.02                         | 0.02                               | 1.03                         | 0.02                               |
| Finance, Insurance and Real Estate    | 1.55                         | 0.35                               | 1.35                         | 0.26                               |
| Services                              | 1.02                         | 0.02                               | 1.06                         | 0.06                               |
| Government and Government Enterprises | 0.92                         | -0.09                              | 0.86                         | -0.17                              |
| Federal, Civilian                     | 0.83                         | -0.20                              | 0.90                         | -0.11                              |
| Military                              | 0.50                         | -0.98                              | 0.54                         | -0.87                              |
| State and Local                       | 1.08                         | 0.07                               | 0.91                         | -0.09                              |

Table 6AH: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
St. Louis (Independent City), 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 1.13                         | 0.11                               | 1.06                         | 0.06                               |
| Ag.Serv., For., Fish., and Other      | 0.09                         | -9.57                              | 0.24                         | -3.12                              |
| Mining                                | 0.14                         | -6.04                              | 0.13                         | -6.54                              |
| Construction                          | 0.56                         | -0.79                              | 0.67                         | -0.48                              |
| Manufacturing                         | 1.15                         | 0.13                               | 1.04                         | 0.04                               |
| Transportation and Public Utilities   | 1.55                         | 0.35                               | 1.70                         | 0.41                               |
| Wholesale Trade                       | 1.67                         | 0.40                               | 1.30                         | 0.23                               |
| Retail Trade                          | 0.79                         | -0.27                              | 0.68                         | -0.47                              |
| Finance, Insurance and Real Estate    | 1.29                         | 0.23                               | 1.12                         | 0.11                               |
| Services                              | 1.29                         | 0.23                               | 1.28                         | 0.22                               |
| Government and Government Enterprises | 0.73                         | -0.37                              | 0.90                         | -0.11                              |
| Federal, Civilian                     | 1.81                         | 0.45                               | 2.42                         | 0.59                               |
| Military                              | 0.28                         | -2.51                              | 0.53                         | -0.90                              |
| State and Local                       | 0.56                         | -0.79                              | 0.64                         | -0.57                              |

Table 6A1: Employment Location Quotient, Export(+) and Import(-) Roles by Sector,  
District of Columbia, 1969 and 1984

|                                       | Location<br>Quotient<br>1969 | Net Import/<br>Export Role<br>1969 | Location<br>Quotient<br>1984 | Net Import/<br>Export Role<br>1984 |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|------------------------------------|
| Farm                                  | 0.00                         | ERR                                | 0.00                         | ERR                                |
| Non-farm                              | 1.05                         | 0.05                               | 1.03                         | 0.03                               |
| Private                               | 0.73                         | -0.38                              | 0.72                         | -0.38                              |
| Ag.Serv., For., Fish., and Other      | 0.00                         | ERR                                | 0.64                         | -0.56                              |
| Mining                                | 0.00                         | ERR                                | 0.05                         | -18.15                             |
| Construction                          | 0.60                         | -0.66                              | 0.37                         | -1.70                              |
| Manufacturing                         | 0.13                         | -6.64                              | 0.13                         | -6.73                              |
| Transportation and Public Utilities   | 1.01                         | 0.01                               | 0.79                         | -0.26                              |
| Wholesale Trade                       | 0.67                         | -0.48                              | 0.28                         | -2.57                              |
| Retail Trade                          | 0.67                         | -0.49                              | 0.48                         | -1.07                              |
| Finance, Insurance and Real Estate    | 1.05                         | 0.05                               | 0.83                         | -0.20                              |
| Services                              | 1.43                         | 0.30                               | 1.45                         | 0.31                               |
| Government and Government Enterprises | 2.47                         | 0.59                               | 2.60                         | 0.62                               |
| Federal, Civilian                     | 9.46                         | 0.89                               | 12.00                        | 0.92                               |
| Military                              | 1.06                         | 0.05                               | 1.77                         | 0.43                               |
| State and Local                       | 0.85                         | -0.18                              | 0.65                         | -0.55                              |

quotients for the sectors listed above declined, between 1969 and 1984, except for the mining and F.I.R.E. sectors.

### 3. The specific role of service industries:

Boston's specialization in service industries, broadly defined as Transportation and Public Utilities, F.I.R.E. and Services, seems to have abated somewhat between 1969 and 1984 if one relies on the information provided by the location quotient, which essentially compares the industrial characteristics of Boston to those of the US economy as a whole.

If we look, however, at the share of employment accounted for by service-producing industries for the 35 largest cities in the US, Boston remains among those with the greatest degree of economic activity in service industries.

Table 7 presents employment in service industries as share of employment in the 35 metropolitan areas for 1969, 1972, 1978 and 1984. Table 8 presents the same information for central city counties.

In 1969, the Boston metropolitan area ranked 4th among the 35 areas, with 35 percent of its total employment in service industries. It still ranked 4th in 1984, with a 42 percent share. Among central city counties, Suffolk County ranked 2nd in 1969 with a 45 percent share, and 1st in 1984 with a 57 percent share.

All metropolitan areas in the study showed a consistent increase in the share of service industries in total employment



between 1969 and 1984 (Table 7) as did the US economy which jumped 7 points from 29 percent to 36 percent. In 1969, the San Francisco metro area ranked 1st, with a 44 percent share, New York City ranked 2nd with 42 percent, New Orleans ranked 3rd with 39 percent and El Paso ranked last with 24 percent. In 1972, Boston ranked 4th with 37 percent and, in 1978, the city was 3rd with 49 percent. Finally, in 1984, San Francisco was 1st with 53 percent, El Paso last with 31 percent, and Boston was 4th, tie with Los Angeles, Pittsburgh and Washington, DC and after New York City and New Orleans.

All metro areas experienced an increase in services share of employment so that the relative rankings did not change much over time. The metro areas which experienced the greatest increase in percentage points over the period are: Milwaukee, from 28 percent to 39 percent and Washington, DC from 33 percent to 42 percent. Buffalo, Chicago, New York, Pittsburgh, and San Diego experienced a 10 point jump between 1969 and 1984.

Service industries employment accounts for an even greater share of total employment in central city counties (Table 8) than in metro areas, indicating that service producing industries locate to a greater degree in the central city.

The share of county employment in service producing industries also increased over time. In 1969, San Francisco County ranked 1st with 47 percent, Suffolk County ranked 2nd with 45 percent and El Paso County was last, with 24 percent. Suffolk County was 2nd, with 47 percent, in 1972 and 1st in 1978,

with 53 percent. Finally, in 1984, Suffolk was 1st, with 57 percent, San Francisco was 2nd, 56 percent, and El Paso was last, 31 percent. While relative rankings do not change much over time, a few central city counties experienced particularly high increases. They are: Baltimore City, from 37 percent to 48 percent, Suffolk County, from 45 percent to 57 percent, and Milwaukee County, from 29 percent to 42 percent.

Table 7. Employment in Service Industries\* / as Share of Total Employment in Metropolitan Areas  
1969, 1972, 1978 and 1984

|                                           | 1969 | 1972 | 1978 | 1984 |
|-------------------------------------------|------|------|------|------|
| Atlanta                                   | 34   | 35   | 38   | 39   |
| Baltimore                                 | 29   | 31   | 33   | 38   |
| Boston -Lawrence -Salem -Lowell -Brockton | 35   | 37   | 39   | 42   |
| Bufalo                                    | 28   | 30   | 33   | 38   |
| Chicago                                   | 32   | 33   | 36   | 42   |
| Cincinnati                                | 31   | 33   | 33   | 37   |
| Cleveland                                 | 29   | 32   | 32   | 38   |
| Columbus                                  | 29   | 32   | 34   | 38   |
| Dallas                                    | 34   | 36   | 36   | 40   |
| Denver                                    | 34   | 35   | **   | 42   |
| Detroit                                   | 27   | 29   | 31   | 36   |
| El Paso                                   | 24   | 28   | 29   | 31   |
| Fort Worth -Arlington                     | 28   | 31   | 32   | 34   |
| Houston                                   | 35   | 36   | 36   | 40   |
| Indianapolis                              | 28   | 30   | 33   | 37   |
| Jacksonville                              | 34   | 37   | 36   | 39   |
| Kansas City                               | 33   | 34   | 36   | 40   |
| Los Angeles -Long Beach                   | 34   | 35   | 38   | 42   |
| Memphis                                   | 30   | 31   | 34   | 39   |
| Milwaukee                                 | 28   | 30   | 34   | 39   |
| Minn.-St. Paul                            | 31   | 33   | **   | 39   |
| Nashville                                 | 31   | 32   | 34   | 38   |
| New Orleans                               | 39   | 39   | 40   | 43   |
| New York                                  | 42   | 44   | 48   | 52   |
| Oklahoma City                             | 30   | 30   | 33   | 33   |
| Philadelphia                              | 31   | 33   | 36   | 40   |
| Phoenix                                   | 32   | 34   | 35   | 39   |
| Pittsburgh                                | 32   | 33   | **   | 42   |
| San Antonio                               | 26   | 28   | 31   | 34   |
| San Diego                                 | 25   | 29   | **   | 35   |
| San Francisco                             | 44   | 46   | 49   | 53   |
| San Jose                                  | 31   | 33   | 34   | 35   |
| Seattle                                   | 31   | 35   | 36   | 40   |
| St. Louis                                 | 32   | 34   | 36   | 41   |
| Washington, DC -Md Va                     | 33   | 34   | 37   | 42   |
| United States                             | 29   | 30   | 32   | 36   |

Note: \*/ Service industries include Transportation and Public Utilities, F.I.R.E. and Services  
\*\*/ indicates that data for some of the sectors are undisclosed.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional  
Economic Information System.



Table 8. Employment in Service Industries\*/ as Share of Total Employment in Central City Counties  
1969, 1972, 1978 and 1984

|                | 1969 | 1972 | 1978 | 1984 |
|----------------|------|------|------|------|
| Atlanta        | 39   | 39   | 41   | 44   |
| Baltimore      | 37   | 39   | 42   | 48   |
| Boston         | 45   | 47   | 53   | 57   |
| Buffalo        | 28   | 30   | 33   | 38   |
| Chicago        | 32   | 33   | 36   | 42   |
| Cincinnati     | 31   | 33   | 34   | 38   |
| Cleveland      | 30   | 33   | 34   | 39   |
| Columbus       | 31   | 34   | 36   | 41   |
| Dallas         | 35   | 37   | 37   | 41   |
| Denver         | 38   | 39   | ERR  | 48   |
| Detroit        | 30   | 32   | 32   | 37   |
| El Paso        | 24   | 28   | 29   | 31   |
| Fort Worth     | 29   | 31   | 33   | 34   |
| Houston        | 36   | 37   | 37   | 40   |
| Indianapolis   | 30   | 32   | 34   | 38   |
| Jacksonville   | 35   | 37   | 37   | 40   |
| Kansas City    | 36   | 37   | 37   | 42   |
| Los Angeles    | 34   | 35   | 38   | 42   |
| Memphis        | 32   | 33   | 35   | 40   |
| Milwaukee      | 29   | 32   | 36   | 42   |
| Minn.-St. Paul | 33   | 35   | ERR  | 42   |
| Nashville      | 36   | 36   | 39   | 43   |
| New Orleans    | 44   | 44   | 46   | 49   |
| New York       | ERR  | ERR  | 49   | 53   |
| Oklahoma City  | 31   | 32   | 34   | 35   |
| Philadelphia   | 36   | 38   | 43   | 46   |
| Phoenix        | 32   | 34   | 35   | 39   |
| Pittsburgh     | 34   | 35   | 38   | 44   |
| San Antonio    | 26   | 28   | 31   | 35   |
| San Diego      | 25   | 29   | ERR  | 35   |
| San Francisco  | 47   | 49   | 52   | 56   |
| San Jose       | 31   | 33   | 34   | 35   |
| Seattle        | 33   | 37   | 37   | 41   |
| St. Louis      | 38   | 40   | 43   | 47   |
| Washington     | 37   | 37   | 39   | 44   |

Note: \*/ Service industries include Transportation and Public Utilities, F.I.R.E. and Services

"ERR" indicates that data were not disclosed.  
Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional  
Economic Information System.

#### 4. Patterns of employment growth:

The patterns of employment change in the Boston MSA and for other large metropolitan areas, were calculated using average annual (compounded <sup>1</sup>) rates of change for time periods of different duration: 1969-84, 1969-72, 1972-78, and 1978-84.

##### 4.a. Boston metropolitan area: average annual percentage change in employment over time:

For each major industrial sector and for each time period, the average annual percentage change in employment for Boston was ranked relative to the same change in all other metropolitan areas and to the US average annual percentage change (See tables 10 to 13).

##### 4.a.1 Change in total non-farm employment over time in Boston as compared to the US economy and to the other metropolitan areas:

The Boston metropolitan area experienced a positive average annual percent change in total non-farm employment for all the time periods we considered.

Most noticeable was the change in Boston's position relative to the other metro areas in recent years. The Boston metro area ranked 20th out of 35 areas between 1969 and 1972; 29th between 1972 and 1978; and 12th between 1978 and 1984. Thus, the metro

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<sup>1</sup> The annual rate of change is computed with the compound rate method as follows:

where 
$$\left( \sqrt[t]{\text{End}/\text{Begin}} - 1 \right) * 100$$
  
t=number of years in the period  
End= employment in the last year of the period  
Begin= employment in the first year of the period

area fared worst during the 1970's and substantially better in the most recent period (table 9).

Compared to the US economy as a whole, the Boston metro area declined from 5 places below the US between 1969-72 to 13 places below between 1972 and 1978, and made a leap to 8 places above the US for the recent period, 1978-84. While some of this improvement may be due to the fact that, between 1978 and 1984, metropolitan areas as a whole grew faster than the US economy (non-metropolitan areas grew more slowly; see Appendix E) during the recent period, this change nevertheless remains drastic.

4.a.2. change in employment in selected industrial sectors:

As shown in the section on locations quotients, Boston's specialization in Retail Trade, Wholesale Trade, F.I.R.E. and Services, and slight specialization in Transportation, became less striking between 1969 and 1984. However, there was a small increase in the location quotient for manufacturing which resulted from a relative growth in manufacturing activity in the Boston metropolitan area and a decrease in manufacturing activity in the US economy as a whole.

The relative alleviation of the specialization of Boston's economy in the service-related industries listed above does not indicate an employment decline. In fact, the average annual percent change in employment in these industries was positive and fairly large for all time periods. It was, however, below the US trend for most time periods, with the exception of services and retail trade in the 1978-84 period (see table 9) .



Table 9A. Average Annual Percent Change in Employment for the Boston Metropolitan Area and the United States; 1969-84, 1969-72, 1972-78 and 1978-84

|                                  | Level<br>% | Rank | U.S. Level<br>% | Rank Rel.<br>to U.S. |
|----------------------------------|------------|------|-----------------|----------------------|
| Total non-farm                   |            |      |                 |                      |
| 1969-84                          | 1.80       | 21   | 2.02            | -3                   |
| 1969-72                          | 0.25       | 20   | 1.28            | -5                   |
| 1972-78                          | 1.46       | 29   | 2.63            | -13                  |
| 1978-84                          | 2.92       | 12   | 1.78            | +8                   |
| Non-farm; manufacturing excluded |            |      |                 |                      |
| 1969-84                          | 2.11       | 24   | 2.61            | -10                  |
| 1969-72                          | 1.51       | 22   | 2.27            | -9                   |
| 1972-78                          | 1.35       | 32   | 2.99            | -16                  |
| 1978-84                          | 3.18       | 11   | 2.41            | +8                   |
| Non-farm; services excluded      |            |      |                 |                      |
| 1969-84                          | 1.14       | 21   | 1.52            | -4                   |
| 1969-72                          | -0.21      | 20   | 0.83            | -6                   |
| 1972-78                          | 0.81       | 31   | 2.33            | -16                  |
| 1978-84                          | 2.15       | 11   | 1.06            | +6                   |
| Manufacturing                    |            |      |                 |                      |
| 1969-84                          | 0.62       | 14   | -0.24           | +3                   |
| 1969-72                          | -4.22      | 26   | -1.96           | -14                  |
| 1972-78                          | 1.87       | 15   | 1.32            | +3                   |
| 1978-84                          | 1.85       | 10   | -0.91           | +9                   |
| Retail Trade                     |            |      |                 |                      |
| 1969-84                          | 1.53       | 27   | 2.52            | -8                   |
| 1969-72                          | 0.87       | 26   | 2.29            | -7                   |
| 1972-78                          | 0.67       | 34   | 2.98            | -14                  |
| 1978-84                          | 2.73       | 16   | 2.17            | +4                   |
| F.I.R.E.                         |            |      |                 |                      |
| 1969-84                          | 2.35       | 30   | 3.95            | -15                  |
| 1969-72                          | 1.78       | 29   | 4.55            | -14                  |
| 1972-78                          | 1.46       | 33   | 4.00            | -18                  |
| 1978-84                          | 3.54       | 16   | 3.60            | -1                   |
| Services                         |            |      |                 |                      |
| 1969-84                          | 3.59       | 25   | 3.83            | -2                   |
| 1969-72                          | 1.70       | 30   | 3.15            | -12                  |
| 1972-78                          | 3.32       | 22   | 3.81            | -6                   |
| 1978-84                          | 4.80       | 11   | 4.19            | +6                   |

Source: US Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

Table 9B. Average Annual Percent Change in Employment for the New York Metropolitan Area and the United States; 1969-84, 1969-72 1972-78 and 1978-84

|                                  | Level<br>% | Rank | U.S. Level<br>% | Rank Rel.<br>to U.S. |
|----------------------------------|------------|------|-----------------|----------------------|
| Total non-farm                   |            |      |                 |                      |
| 1969-84                          | -0.31      | 35   | 2.02            | -17                  |
| 1969-72                          | -1.78      | 34   | 1.28            | -19                  |
| 1972-78                          | -1.17      | 35   | 2.63            | -19                  |
| 1978-84                          | 1.30       | 23   | 1.78            | -4                   |
| Non-farm; manufacturing excluded |            |      |                 |                      |
| 1969-84                          | 0.31       | 35   | 2.61            | -21                  |
| 1969-72                          | -0.77      | 33   | 2.27            | -20                  |
| 1972-78                          | -0.79      | 35   | 2.99            | -19                  |
| 1978-84                          | 1.98       | 22   | 2.41            | -4                   |
| Non-farm; services excluded      |            |      |                 |                      |
| 1969-84                          | -1.10      | 35   | 1.52            | -18                  |
| 1969-72                          | -2.24      | 33   | 0.83            | -19                  |
| 1972-78                          | -1.94      | 35   | 2.33            | -20                  |
| 1978-84                          | 0.34       | 19   | 1.06            | -3                   |
| Manufacturing                    |            |      |                 |                      |
| 1969-84                          | -3.65      | 18   | 0.24            | -18                  |
| 1969-72                          | -6.11      | 32   | -1.96           | -22                  |
| 1972-78                          | -3.12      | 35   | 1.32            | -18                  |
| 1978-84                          | -2.93      | 28   | -0.91           | -10                  |
| Retail Trade                     |            |      |                 |                      |
| 1969-84                          | -0.72      | 35   | 2.52            | -16                  |
| 1969-72                          | -2.20      | 35   | 2.29            | -16                  |
| 1972-78                          | -1.62      | 35   | 2.98            | -15                  |
| 1978-84                          | 0.94       | 27   | 2.17            | -8                   |
| F.I.R.E.                         |            |      |                 |                      |
| 1969-84                          | 0.66       | 35   | 3.95            | -20                  |
| 1969-72                          | -0.97      | 35   | 4.55            | -20                  |
| 1972-78                          | -0.91      | 34   | 4.00            | -19                  |
| 1978-84                          | 3.10       | 20   | 3.60            | -5                   |
| Services                         |            |      |                 |                      |
| 1969-84                          | 1.72       | 35   | 3.83            | -12                  |
| 1969-72                          | -0.37      | 35   | 3.15            | -17                  |
| 1972-78                          | 0.97       | 32   | 3.81            | -16                  |
| 1978-84                          | 3.54       | 25   | 4.19            | -9                   |

Source: US Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

Table 9C. Average Annual Percent Change in Employment for the San Francisco Metropolitan Area and the United States; 1969-84, 1969-72, 1972-78, 1978-84

|                                  | Level<br>% | Rank | U.S. Level<br>% | Rank Rel.<br>to U.S. |
|----------------------------------|------------|------|-----------------|----------------------|
| Total non-farm                   |            |      |                 |                      |
| 1969-84                          | 1.76       | 22   | 2.02            | -4                   |
| 1969-72                          | -0.80      | 31   | 1.28            | -16                  |
| 1972-78                          | 2.46       | 18   | 2.63            | -2                   |
| 1978-84                          | 2.35       | 17   | 1.78            | +3                   |
| Non-farm; manufacturing excluded |            |      |                 |                      |
| 1969-84                          | 2.01       | 26   | 2.61            | -12                  |
| 1969-72                          | -0.32      | 32   | 2.27            | -19                  |
| 1972-78                          | 2.76       | 20   | 2.99            | -4                   |
| 1978-84                          | 2.52       | 17   | 2.41            | +2                   |
| Non-farm; services excluded      |            |      |                 |                      |
| 1969-84                          | 0.88       | 23   | 1.52            | -6                   |
| 1969-72                          | -1.53      | 31   | 0.83            | -17                  |
| 1972-78                          | 1.63       | 22   | 2.33            | -7                   |
| 1978-84                          | 1.34       | 15   | 1.06            | +2                   |
| Manufacturing                    |            |      |                 |                      |
| 1969-84                          | -0.53      | 18   | 0.24            | -2                   |
| 1969-72                          | -4.68      | 27   | -1.96           | -15                  |
| 1972-78                          | 0.53       | 24   | 1.32            | -7                   |
| 1978-84                          | 0.54       | 17   | -0.91           | +2                   |
| Retail Trade                     |            |      |                 |                      |
| 1969-84                          | 2.40       | 20   | 2.52            | -1                   |
| 1969-72                          | -0.65      | 33   | 2.29            | -14                  |
| 1972-78                          | 3.47       | 19   | 2.98            | +2                   |
| 1978-84                          | 2.87       | 14   | 2.17            | +6                   |
| F.I.R.E.                         |            |      |                 |                      |
| 1969-84                          | 3.23       | 24   | 3.95            | -9                   |
| 1969-72                          | 1.76       | 30   | 4.55            | -15                  |
| 1972-78                          | 4.00       | 16   | 4.00            | -1                   |
| 1978-84                          | 3.19       | 17   | 3.60            | -2                   |
| Services                         |            |      |                 |                      |
| 1969-84                          | 4.14       | 19   | 3.83            | 5                    |
| 1969-72                          | 1.62       | 31   | 3.15            | -13                  |
| 1972-78                          | 4.82       | 9    | 3.81            | +8                   |
| 1978-84                          | 3.19       | 17   | 4.19            | -2                   |

Source: US Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

The increased location quotient for manufacturing noted above resulted from changes having taken place mostly since the late 1970's. For 1969 to 1972, Boston ranked 26th out of 35 and 14th below the US in terms of manufacturing employment growth; but both experienced a decline. Boston was among the hardest hit metro areas for this time period. For 1972 to 1978, Boston ranked 15th out of 35 and 3rd above the US; both had positive growth. For 1978 to 1984, however, Boston was 10th out of 35, and 9th above the US. Moreover, in this recent time period, Boston experienced a growth in manufacturing employment while the US experienced a decline as did many large cities. As a result, the manufacturing location quotient for Boston actually went up between 1969 and 1984. While other industrial cities shed their manufacturing activity in the 70's and 80's, Boston had lost a large share of its manufacturing in earlier periods. It is somewhat of a surprise that such an old industrial area well known for its fairly recent specialization in service-related industries should experience a comparative gain in manufacturing.

An additional set of rankings isolates the respective contribution of services and of manufacturing to employment growth in Boston. For each industrial sector and each time period, Boston's average annual rate of change in employment once services, first, and manufacturing, second, were excluded from



total non-farm employment, <sup>2</sup> was ranked relative to trends in other metro areas and to the US trend.

Relative rankings of metro areas on the average annual change in total non-farm employment minus services highlight the contribution of services, narrowly defined, to growth. Without services, the rest of Boston's economy grew less fast, as is true for the US economy. For the 1969 to 1972 period, employment growth went from a small positive, 0.25 percent, with service to a negative, -0.21 percent, without. In other words, services helped prevent the decline of the Boston economy through the 1969 to 1972 period. Most striking is that Boston's rank relative to other cities and to the US did not change with the exclusion of services. In other words, services "served" the Boston economy by contributing to the growth in employment in the same way that they "aided" the US economy.

Relative rankings of metropolitan areas on average annual changes in total non-farm employment minus manufacturing bring to light the growth that cities would have experienced had their employment grown as that of all sectors other than manufacturing. Both Boston and the US as a whole would have experienced greater growth in the absence of manufacturing for all time periods. For the whole time period 1969-84, the average annual rate of change for metropolitan Boston employment was higher without

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<sup>2</sup> Daniel H. Garnick, "Local Area Economic Growth Patterns: A Comparison of the 1980's and Previous Decades," presented at American Economic Association Meetings, New Orleans, December 1986.

manufacturing. Yet Boston's rank relative to that of other metro areas worsened (21st to 24th) probably because other cities benefited even more from the absence of manufacturing. In other words, the decline in manufacturing activity hurt the total employment picture of other metropolitan areas more than Boston's. This overall pattern was true for the 1969-72 time period as well. For the 1972-78 period, however, the reverse was true. Total non-farm employment minus manufacturing grew less than if manufacturing employment were included (1.46 percent with manufacturing; 1.35 percent without) and Boston's relative ranking worsened (29th with; 32nd without). Manufacturing employment growth actually contributed to total employment growth in the Boston metro area during the 1972-78 time period. This pattern is different from that for other cities and other time periods. It might be explained by the fact that Boston's employment was severely affected by the decline in manufacturing in the previous time period 1969-72, and experienced some manufacturing activity during 1972-78, while other cities experienced a drastic decline in manufacturing during this latter period. For the recent time period, 1978-84, Boston as other cities experienced more growth and an improved relative ranking once manufacturing was excluded.

So it appears that the Boston economy followed the national trend in services activity and was affected by manufacturing decline but not as much as other cities such as Buffalo, Pittsburgh, Detroit, and Philadelphia.

The next sections explore employment trends across metropolitan areas. The challenge in examining patterns of growth across such a large number of metropolitan areas is to generate summary information on changing patterns of employment across time periods, across industrial sectors and, obviously, across metropolitan areas. This report takes two approaches to this end.

The first is to characterize each time period. For each period and industrial sector, this section identifies the metro area with the highest average annual rate of change in employment, that with the lowest rate, the US rate, and how many metro areas are above it and below it (Section 4.b).

The second approach is to characterize the pattern of distribution of metropolitan areas across levels of annual average employment change and to observe this distribution across time periods and industrial sectors. In this section, bar graphs represent frequency distributions (Section 4.c).

The following two sections examine rates of change rather than levels of employment which vary greatly across metropolitan areas; a high rate of employment growth requires to be interpreted in terms of the size of the employment base of an industry.



4.b. Patterns of employment growth for other metropolitan areas: rankings of metropolitan areas on the average annual percentage change in employment in selected industrial sector

The 1969-1984 Time period (Table 10)

1969-84: Total non-farm employment

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 5.80 %  | Phoenix                                |
| US rate      | 2.02 %  | with 18 metro areas above and 17 below |
| Lowest rate  | -0.31 % | New York City                          |

Two other cities had negative rates; Cleveland and Buffalo. Chicago, Detroit and Pittsburgh were among those with the lowest rate of growth in total non-farm employment. The metro areas in our study were evenly distributed on both sides of the rate for the US economy as a whole.

1969-84: Total non-farm employment, manufacturing excluded

|              |        |                                        |
|--------------|--------|----------------------------------------|
| Highest rate | 6.29 % | Phoenix                                |
| US rate      | 2.61 % | with 14 metro areas above and 21 below |
| Lowest rate  | 0.31 % | New York City                          |

For the whole time period of the study, levels of rates of growth in employment improved once manufacturing employment is excluded from the calculation. The metro areas with the highest and lowest rate remain the same, however. Philadelphia, Chicago, Detroit, Pittsburgh, Buffalo, Cleveland and New York City remain those with lowest rates. With the exclusion of manufacturing, a few more cities fall below the rate for the US economy as a whole.

1969-84: Total non-farm employment, services excluded

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 5.33 %  | Phoenix                                |
| US rate      | 1.52 %  | with 17 metro areas above and 18 below |
| Lowest rate  | -1.10 % | New York City                          |



Once services are excluded, rates of growth are lower for cities which ranked high on total employment, and are substantially worse for cities which ranked low. Seven cities have negative rates; they are the same cities which were among those at the bottom of the ranking for total employment.

1969-84: Manufacturing employment

Highest rate 5.64 % San Jose. No other metro area above 4 %  
US rate -0.24 % with 16 metro areas above, 18 below  
Lowest rate -3.35 % New York City

The cities with top rates are from the West, Southwest and South; only Washington, DC, 2.78 percent, is on the East Coast.

#### 1969-84 Retail trade employment

Highest rate 5.88 % Phoenix  
US rate 2.52 % with 19 metro areas above, 16 below  
Lowest rate -0.72 % New York City, the only negative metro area.

#### 1969-84 F.I.R.E. employment

Highest rate 7.94 % Phoenix  
US rate 3.95 % with 15 metro areas above, 20 below  
Lowest rate 0.66 % New York City

F.I.R.E. employment displayed a lot more growth than other sectors across all metropolitan areas. None experienced a negative rate of growth.

#### 1969-84 Services employment

Highest rate 7.38 % Phoenix  
US rate 3.83 % with 23 metro areas above and 12 below  
Lowest rate 1.72 % New York City

Services employment presented a pattern of growth similar to that of F.I.R.E. employment, with the significant difference that while the highest rate was not higher for services, most cities experienced a greater growth in services than in F.I.R.E. employment. New York City, the metro area with the lowest rate, also experienced more growth than in F.I.R.E. and all other areas had rates of growth above 2 percent. The fact that 23 metro areas had rates of growth above the US rate indicates that, as expected from the nature of the industry, the growth in services was more likely to take place in metropolitan areas than in rural areas.

--Break down of time periods--

The 1969-1972 time period (Table 11)

1969-72: Total non-farm employment

Highest rate 6.56 % Phoenix, only metro area above 6 %  
US rate 1.28 % with 15 metro areas above, 20 below  
Lowest rate -2.66 % Seattle

While Seattle was the only city with a rate below -2 percent, 13 areas had a negative rate of change in total employment during the period. They were: NYC, Cleveland, Chicago, San Francisco, Pittsburgh, Buffalo, Philadelphia, St.Louis, El Paso and Detroit.

1969-72: Total non-farm employment; manufacturing excluded

Highest rate 8.04 % Phoenix  
US rate 2.27 % with 13 metro areas above, and 22 below  
Lowest rate -1.07 % El Paso

The other two cities with negative rates were San Francisco and New York City. As expected, all metro areas had higher rates of employment growth with manufacturing employment excluded, thus highlighting the contribution of manufacturing decline to depressing total employment growth.

1969-72: Total non-farm employment; services excluded

Highest rate 6.31 % Phoenix  
US rate 0.83 % with 14 metro areas above and 21 below  
Lowest rate -3.99 % Seattle

Eighteen metro areas, about half of those in the study, experienced a negative rate of growth once services employment is excluded. They included the same 13 cities as for total non-farm employment plus Chicago, Buffalo, Boston, San Diego and Milwaukee. In the absence of services employment, these latter metro areas would have experienced a decline in total non-farm

employment, while the former 13 would have witnessed an even greater decline.

1969-72: Manufacturing employment

Highest rate 4.65 % El Paso  
US rate -1.96 % 12 metro areas above it and 22 below  
Lowest rate -12.63 % Seattle, only metro area below -9 %

The metro areas with positive growth in manufacturing employment were El Paso, Denver, Oklahoma, Nashville, Houston, San Antonio, and Phoenix.

1969-72: Retail Trade employment

Highest rate 6.28 % Memphis, Denver  
US rate 2.29 % 19 metro areas above it; 16 below  
Lowest rate -2.20 New York City

The other metro areas with negative rates were Seattle, San Francisco, Chicago, Cleveland and Buffalo.

1969-72: F.I.R.E. employment

Highest rate 13.09 % San Diego  
US rate 4.55 % 15 metro areas above it and 20 below  
Lowest rate -0.97 % New York City

The two other highest ranking metro areas were Phoenix and El Paso while Seattle was the only other metro area with a negative rate. The spread between highest rates and lowest rates was very wide.

1969-72: Services employment

Highest rate 7.51 % Phoenix  
US rate 3.15 % 18 metro areas above it and 17 below  
Lowest rate -0.37 % New York City

Pittsburgh was the only other metro area with a negative rate representing a slight decline in services employment. Service



employment grew in most areas for the period but at moderate rates in most instances.

The 1972-78 time period (Table 12)

1972-78 Total non-farm employment

|              |         |                                       |
|--------------|---------|---------------------------------------|
| Highest rate | 6.69 %  | Phoenix                               |
| US rate      | 2.63 %  | 16 metro areas are above it; 19 below |
| Lowest rate  | -1.17 % | New York City (only negative rate)    |

Five cities had rates above 5 percent: San Jose, Phoenix, San Diego and Seattle. Two cities had rates below 1 percent: Philadelphia and Buffalo.

1972-78 Total non-farm employment; manufacturing excluded

|              |         |                                       |
|--------------|---------|---------------------------------------|
| Highest rate | 6.87 %  | Houston                               |
| US rate      | 2.99 %  | 16 metro areas are above it; 19 below |
| Lowest rate  | -0.79 % | New York City (only negative rate)    |

This relative ranking of metro areas is not very different from that based on total employment including manufacturing. San Antonio and Boston are two cities whose relative position worsened once manufacturing employment was excluded; their economy was in some way less affected during this period by manufacturing decline than that of other cities in the study.

1972-78 Total non-farm employment; services excluded

|              |         |                                       |
|--------------|---------|---------------------------------------|
| Highest rate | 9.59 %  | San Diego                             |
| US rate      | 2.33 %  | 15 metro areas are above it; 20 below |
| Lowest rate  | -1.94 % | New York City                         |

With the exclusion of services, metro areas which were at the bottom of the ranking for total non-farm employment, such as Philadelphia and Buffalo, did worse but areas which were at the top of the ranking, Denver, Minneapolis -St. Paul and Houston, did

better during this period. These areas experienced high growth during the period in sectors which were goods producing sectors. The growth of services employment was particularly helpful for those metro areas experiencing little growth in other sectors. The US economy as a whole also benefitted from the growth of services; its growth rate is lower in the absence of services employment.

#### 1972-78 Manufacturing employment

|              |         |                                       |
|--------------|---------|---------------------------------------|
| Highest rate | 8.12 %  | San Jose                              |
| US rate      | 1.32 %  | 17 metro areas are above it; 18 below |
| Lowest rate  | -3.12 % | New York City                         |

During the 1972-78 period, manufacturing employment growth varied greatly across metro areas. San Jose, the center of Silicon Valley, had the only rate of growth above 7 percent but 5 industrial cities, in addition to New York City, had negative rates (decline): Philadelphia with -1.67 percent, Baltimore with -1.16 percent, Buffalo with -0.91 percent, Pittsburgh with -0.51 percent and Chicago with -0.47 percent. Only 8 cities had a growth rate above 3 percent.

#### 1972-78 Retail trade employment

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 6.73 %  | Phoenix                                |
| US rate      | 2.98 %  | with 20 metro areas above and 15 below |
| Lowest rate  | -1.62 % | New York City                          |

Most cities experienced at least some growth in Retail Trade employment during this period. Only one metro area had a negative rate. The rate for the US economy as a whole was fairly low reflecting the fact that retail trade employment grew faster in metropolitan areas than in non-metropolitan areas.

#### 1972-78 F.I.R.E. employment

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 7.23 %  | San Diego                              |
| US rate      | 4.00 %  | with 15 metro areas above and 19 below |
| Lowest rate  | -0.91 % | New York City (only 1 negative)        |

F.I.R.E. employment grew in almost all metro areas during this period. This growth was not concentrated only in the nation's largest metropolitan areas since 19 cities in our sample had rates below the US rate.

#### 1972-78 Services employment

|              |        |                                        |
|--------------|--------|----------------------------------------|
| Highest rate | 7.09 % | San Jose                               |
| US rate      | 3.81 % | with 16 metro areas above and 16 below |
| Lowest rate  | 0.97 % | New York City                          |

New York city was the only metro area with a rate below 2 percent. All metro areas experienced a moderate to high growth in service employment during this period.

#### The 1978-84 time period (Table 13)

##### 1978-84 Total non-farm employment

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 5.38 %  | Phoenix                                |
| US rate      | 1.78 %  | with 19 metro areas above and 16 below |
| Lowest rate  | -1.11 % | Detroit                                |

There is great disparity in economic performance across metro areas for the 1978-84 period. While cities such as Phoenix experienced high growth, 4 cities had a decline in total non-farm employment: Detroit, -1.11 percent, Pittsburgh, -0.67 percent, Cleveland, -0.67 percent, and Buffalo, -0.30 percent.

##### 1978-84 Total non-farm employment minus manufacturing

|              |        |                                        |
|--------------|--------|----------------------------------------|
| Highest rate | 5.86 % | Dallas                                 |
| US rate      | 2.41 % | with 18 metro areas above and 17 below |
| Lowest rate  | 0.26 % | Detroit                                |

In the absence of manufacturing, the relative rankings of metro areas changed very little, but the actual level of the annual rate of change in employment changed drastically for those areas at the bottom of the ranking. Detroit, Pittsburgh, Cleveland and Buffalo went from a negative rate of change to a positive one.

1978-84 Total non-farm employment minus services

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 4.75 %  | Dallas                                 |
| US rate      | 1.06 %  | with 16 metro areas above and 19 below |
| Lowest rate  | -2.55 % | Minneapolis- St.Paul                   |

The rates of employment growth are lower for all metro areas once services employment is excluded. For 1978-84, all metro areas benefited from the growth of services employment. The 10 metro areas which experienced negative employment growth and displayed a reliance on services employment were of two kinds. Some were metro areas which also experienced little growth and even decline in total non-farm employment: Detroit, Pittsburgh, Cleveland, Buffalo, Chicago, Milwaukee, and Cincinnati. For these, the absence of services employment made for an even greater decline. Others did quite well with services employment included but experienced a decline without. Minneapolis -St.Paul, which ranked last and had a very negative rate without services employment, ranked 16th in growth in total non-farm employment, and 15th in total employment with manufacturing excluded. This metro area relied heavily on services employment growth during the period. Denver and San Diego were in a similar situation.



#### 1978-84 Manufacturing employment

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 6.40 %  | San Jose                               |
| US rate      | 1.85 %  | with 18 metro areas above and 17 below |
| Lowest rate  | -6.33 % | Pittsburgh                             |

The spread between the highest and the lowest rate of change in manufacturing employment was the widest for any industrial sector in this period. Some metro areas fared well, while others did very badly. Seventeen areas had negative rates; 13 of which had rates below -2 percent. Only 4 cities had rates above 4 percent. The US rate was quite low as well.

#### 1978-84 Retail Trade employment

|              |         |                                        |
|--------------|---------|----------------------------------------|
| Highest rate | 5.54 %  | Dallas                                 |
| US rate      | 2.17 %  | with 19 metro areas above and 16 below |
| Lowest       | -0.40 % | Cleveland                              |

Retail trade employment grew in most metro areas in this period. Only Cleveland and Detroit had negative rates. Retail trade growth appeared to be tied to growth in other sectors since the cities at the bottom of the retail trade ranking, Cleveland, Detroit, Buffalo, Milwaukee, Chicago, Pittsburgh, and Memphis, were also at the bottom of the ranking on total employment.

#### 1978-84 F.I.R.E. employment

|              |        |                                        |
|--------------|--------|----------------------------------------|
| Highest rate | 7.74 % | Denver                                 |
| US rate      | 3.60 % | with 15 metro areas above and 19 below |
| Lowest rate  | 0.05 % | Detroit                                |

F.I.R.E. employment grew moderately in all metro areas although the rate of growth for Detroit was barely positive. Six metro areas had rates above 6 percent; they were all those of cities in the West and South West. Metro areas with only moderate growth

were also those industrial areas which lost a substantial portion of their manufacturing or mining activity during the period.

#### 1978-84 Services employment

|              |        |                                        |
|--------------|--------|----------------------------------------|
| Highest rate | 8.04 % | Phoenix                                |
| US rate      | 4.19 % | with 16 metro areas above and 16 below |
| Lowest rate  | 2.76 % | Cleveland                              |

Services employment grew at least moderately in all metro areas. Even cities doing badly in many of the other sectors, such as Detroit, Pittsburgh, Buffalo, Memphis, Milwaukee, Cincinnati, and New York, experienced moderate growth in services employment during the period.

#### 4.c. Patterns of employment growth for other metropolitan areas: distribution of metropolitan areas by average annual change in employment for selected industrial sectors

This section examines the distribution of metropolitan areas across rates of change. It assesses to what extent rates of growth in employment change over time and to what degree the disparity in employment growth across the metropolitan areas in the study changes across time. If metro areas are closely clustered around a level of employment growth in one time period, and scattered across a wide range of levels of growth in another time period, then there is an increasing disparity of growth across cities or regions. This comparison can be done for rates of growth in total employment and for rates of employment growth in specific industries.

Bar graphs provide an easily accessible representation of the amplitude of rates of growth; movement from left to right along the horizontal scale indicates increasing rates of growth.

Bar graphs also give an indication of the clustering of cities. A high bar represents a high count of cities for a given rate of growth; it is a frequency distribution.

The graphs allocate metro areas to intervals of rates of growth. For an area to fall in the interval from 2 to 3 percent means that its average annual rate of growth in employment is strictly greater than 2 percent and less than, or equal to, 3 percent. A rate of 2.89 percent falls in the interval of 2 to 3 percent, while a rate of 3.02 percent falls in the interval of 3 to 4 percent. Using intervals allows for the clustering of metro areas with similar, but not identical, rates of growth.

This section examines total non-farm employment and each industrial sector employment, in turn, across time periods.

#### TOTAL NON-FARM EMPLOYMENT

##### 1969-84 Total non-farm employment (Fig. 1A)

For 1969-84, there were 3 metro areas with negative rates; all others had rates under 6 percent. Most of the metro areas experienced moderate job growth with 10 cities with rates between 1 percent and 2 percent and 8 cities with rates between 2 percent and 3 percent.

##### 1969-72 Total non-farm employment (Fig. 1B)

For 1969-72, the spread of rates was very large, from -3 percent to 7 percent, indicating great disparity across metro areas. Ten metro areas experienced little growth --between



-1 percent and 0 percent-- and 20 metro areas had rates between 1 and 4 percent.

1972-78 Total non-farm employment (Fig. 1C)

Only one metro area had a negative rate; all others had rates between 0 and 7 percent. Of these, 17 had rates between 1 and 3 percent and 10 had rates between 3 and 5 percent.

1978-84 Total non-farm employment (Fig. 1D)

Metro areas were more evenly spread across the scale of rates of growth than in the previous time period. There were 4 areas with negative rates and 16 cities between 1 and 3 percent.

TOTAL NON-FARM EMPLOYMENT - MANUFACTURING EXCLUDED

1969-84 Total non-farm employment minus manufacturing (Fig. 2A)

As expected, this distribution is similar to that for total non-farm employment including manufacturing, but is shifted to the right; all rates are higher once the dampening effect of manufacturing decline is removed. Thirty-two metro areas had rates between 1 and 7 percent. Three cities had rates between 0 and 1 percent and 14 had rates between 2 percent and 3 percent; there is less disparity with manufacturing employment excluded.

1969-72 Total non-farm employment minus manufacturing (Fig. 2B)

Again, this distribution shows an improvement, a shift to the right, which is even more striking than for the total time



period, indicating that manufacturing decline affected these metro areas greatly during the early 1970's.

1972-78 Total non-farm employment minus manufacturing (Fig. 2C )

This distribution does not show as strong an improvement from the absence of manufacturing, as for the previous time period. Only one metro had a negative rate, as opposed to 3 with manufacturing employment included, 11 metro between 2 and 3 percent and no metro with a rate above 7 percent.

1978-84 Total non-farm employment minus manufacturing (Fig. 2D)

No metro area showed a greater rate of growth in the absence of manufacturing; areas which had high rates of growth of total non-farm employment were also those which did not get significantly affected by a decline in manufacturing activity during this recent period, such as Phoenix and Dallas. There were no cities with negative growth, vs. four when manufacturing was included. There were 12 metro areas with rates between 3 and 5 percent, instead of 7 with manufacturing included.

TOTAL NON-FARM EMPLOYMENT; SERVICES EXCLUDED

1969-84 Total non-farm employment minus services (Fig.3A)

As expected, all metro areas were "worse off" without the growth in services employment. This distribution has shifted to the left, towards lower rates of growth for all metro areas. The rates ranged from -2 percent to 5 percent; but 22 metro areas had rates that were lower than 2 percent.

1969-72 Total non-farm employment minus services (Fig. 3B)

Eighteen metro areas had rates that were less than or equal to 0 percent as compared to 13 metro areas were services included. Seventeen metro areas had rates that were positive but less than 7 percent as opposed to 22 metro areas when services were included. For this time period, excluding services did not affect all metro areas uniformly downward. For instance, the two cities with high total non-farm employment rates, Phoenix and Denver, retained rates that were almost as high.

1972-78 Total non-farm employment minus services (Fig. 3C)

The absence of services affects this distribution for 1972-78 in two opposite ways. There is more clustering of metro areas with rates between 1 and 2 percent, indicating that a large number of areas experienced little employment growth in the absence of services employment. Yet, metropolitan San Diego, Denver and Minneapolis -St Paul had rates between 7 and 10 percent and were "better off" in the absence of services. The growth of employment in other sectors was more beneficial than services were to the growth of total non-farm employment in these metro areas. For the 1972-78 time period, then, services employment grew in ways which were beneficial to the employment picture of most but not all large metro areas.

1978-84 Total non-farm employment minus services (Fig. 3D)

This distribution is fairly uniformly affected by the absence of services. The upper bound for rates of growth is 5 percent instead of 6 percent with manufacturing included; and the

lower bound is -3 instead of -2 percent. There are ten cities with negative rates of growth instead of 4 in the presence of services; 9 cities instead of 5 have rates between 0 and 1 percent; and 9 cities instead of 16 have rates between 1 and 3 percent.

## MANUFACTURING EMPLOYMENT

### 1969-84 Manufacturing employment (Fig. 4A)

For 1969-84, the distribution of rates of growth in manufacturing employment was wide, from -4 percent to 6 percent with a lot of metro areas clustered around zero or no growth. Eighteen metro areas experienced a decline; 9 had a positive rate but no greater than 2 percent, and only one metro area had a rate greater than 4 percent.

### 1969-72 Manufacturing employment (Fig. 4B)

There was a significant decline in manufacturing activity in this time period. Twenty-seven metro areas had negative rates; of these eleven metro areas had rates between -4 and -3 percent. Among those areas with positive rates, 3 were between 0 and 1 percent and 3 were between 4 and 5 percent.

### 1972-78 Manufacturing employment (Fig. 4C)

Compared to the previous time period, this distribution shows an overall shift towards positive growth rates and an improvement in the condition of manufacturing employment growth. Again, the spread across metro areas was large, from -4 to 9 percent, indicating that manufacturing decline in many cities was



accompanied by significant growth in a few others. Six metro areas had negative rates; 10 were between 0 and 1 percent; 11 were between 1 and 3 percent. Two cities had rates above 6 percent; San Diego at 6.29 percent and San Jose at 8.12 percent.

#### 1978-84 Manufacturing employment (Fig. 4D)

This recent period shows a very uneven growth in manufacturing employment across metro areas. Rates range from -7 percent to 7 percent. Seventeen areas had rates between -7 percent and -1 percent, and 18 had rates between 0 and 7 percent. The metro areas in the study were evenly split across positive and negative growth rates. The cities with highest growth were San Jose, Washington D.C., Phoenix, San Diego, El Paso, Dallas and Atlanta. Cities with lowest growth were Pittsburgh, Buffalo, Detroit, Cleveland, Chicago and Milwaukee.

#### RETAIL TRADE

##### 1969-84 Retail trade employment (Fig. 5A)

For the whole time period of the study, retail trade employment showed positive and moderate growth. Only one metro area displayed a slightly negative growth: New York City. No city had a rate above 6 percent. Eight cities had rates between 1 and 2 percent; 7 had rates between 2 and 3 percent; and 9 had rates between 4 and 5 percent. Overall, 24 metro areas had rates between 1 and 5 percent.



#### 1969-72 Retail trade employment (Fig. 5B)

For 1969-72, metro areas were fairly evenly distributed across a range going from -3 percent to 7 percent. Six cities had a negative rate. The largest cluster of cities counted 7 with rates between 3 and 4 percent.

#### 1972-78 Retail trade employment (Fig. 5C)

During the 1972-78 period, retail trade employment showed substantial improvement over the previous period. More metro areas showed positive growth and only one, New York City, had a negative rate. The highest rate did not show significant improvement; in other words, only the cities at the bottom of the ranking in the previous period improved their position. As a result most cities, 27, had rates between 1 and 5 percent.

#### 1978-84 Retail trade employment (Fig. 5D)

During this recent period, metro areas were even more clustered in terms of rates of growth. Two metro areas had slightly negative rates, Detroit and Cleveland; these were industrial cities also suffering from a decline in their main activity, manufacturing. The other metro areas were rather clustered; there were 7 cities with rates between 0 and 1 percent, 7 between 1 and 2 percent, and 7 between 3 and 4 percent. Thus, in the recent period, most cities experienced some growth in retail trade employment, albeit a moderate one. Only when their main economic activity was severely impaired did some cities experience no growth of retail activity. Cities with

little or no growth were also those experiencing a manufacturing decline such as Buffalo, Milwaukee, Chicago, Pittsburgh, Memphis.

#### F.I.R.E. EMPLOYMENT

##### 1969-84 F.I.R.E. employment (Fig. 6A)

For the 1969-84 period, all metro areas experienced a positive average annual change in F.I.R.E. employment; rates ranged from 0 to 8 percent. Eighteen metro areas had rates between 2 and 3 percent, 9 metro areas had rates between 3 and 4 percent and 7 had rates between 5 and 6 percent.

##### 1969-72 F.I.R.E. employment (Fig. 6B)

The range of growth rates (from -1 to 14 percent) was greater for the 1969-72 period than for the other periods. Four cities had rates between 1 and 2 percent, 5 between 2 and 3 percent and 6 between 3 and 4 percent. Three cities had very high rates: San Diego (13.09 percent), Phoenix (12.67 percent) and El Paso (10.09 percent).

##### 1972-78 F.I.R.E. employment (Fig. 6C)

Contrary to the previous period, during the 1972-78 period, metro areas clustered by rate of growth. Only New York City had a negative rate (-0.91 percent). Twenty metro areas fell between 0 and 5 percent: 3 metro were between 2 and 3 percent, 12 were between 3 and 4 percent, and 8 were between 4 and 5 percent.

##### 1978-84 F.I.R.E. employment (Fig. 6D)

Between 1978 and 1984, there was no metro area with a negative rate of change. Metro areas were more scattered across

the spectrum of rates of change than in the 1978-84 period, indicating less uniformity in patterns of growth. Nine metro areas had rates between 2 and 3 percent, 8 had rates between 3 and 4 percent and 7 had rates between 4 and 5 percent.

#### SERVICES EMPLOYMENT

##### 1969-84 Services employment (Fig. 7A)

Services employment grew consistently across metro areas for the whole time period of the study. No city had a negative rate of growth; rates ranged from 1.72 percent for New York City to 7.38 percent for Phoenix. Most cities in the sample experienced moderate to high growth in services employment: 12 had a rate between 3 and 4 percent, 12 had a rate between 4 and 5 percent, and 4 had a rate between 5 and 6 percent.

##### 1969-72 Services employment (Fig. 7B)

Two metro areas, New York City and Pittsburgh, had slightly negative rates; all other metro areas experienced moderate to significant growth during the 1969 to 1972 period. Eleven metro areas had growth rates between 3 and 4 percent, and 6 had rates between 4 and 5 percent. A few cities experienced quite high annual growth rates: 3, Columbus, San Diego and Denver, had rates between 6 and 7 percent, and one, Phoenix, was above 7 percent.

##### 1972-78 Services employment (Fig. 7C)

The 1972-78 period displayed more growth in services employment than the previous one. No city had a negative rate.

Metro areas were very clustered around a few rates of growth; they shared the same pattern of growth in services employment. Four cities had rates between 2 and 3 percent, 11 had rates between 3 and 4 percent, 9 had rates between 4 and 5 percent and 4 had rates between 5 and 6 percent.

1978-84 Services employment (Fig. 7D)

This recent period continued the trend of the previous one in an even more accentuated way. Service employment grew significantly and fairly uniformly in all metro areas in this study. No city had a rate below 2 percent. Nine cities had rates between 3 and 4 percent, 11 had rates between 4 and 5 percent and 7 had rates between 5 and 6 percent. Three cities had very high rates: Phoenix, 8.04 percent, Dallas, 7.55 percent, and San Jose, 6.57 percent.



Table 10A. Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, 1969-84

|                        | AvgAn.<br>% Chg. | Rk. | Rk.Rel.<br>to U.S. |
|------------------------|------------------|-----|--------------------|
| Phoenix                | 5.80             | 1   | 18                 |
| San Jose               | 5.09             | 2   | 17                 |
| Houston                | 4.83             | 3   | 16                 |
| Denver                 | 4.35             | 4   | 15                 |
| Dallas                 | 4.20             | 5   | 14                 |
| San Diego              | 3.79             | 6   | 13                 |
| Atlanta                | 3.77             | 7   | 12                 |
| Oklahoma City          | 3.58             | 8   | 11                 |
| Fort Worth             | 3.53             | 9   | 10                 |
| Jacksonville           | 3.03             | 10  | 9                  |
| Nashville              | 2.86             | 11  | 8                  |
| San Antonio            | 2.81             | 12  | 7                  |
| Seattle                | 2.61             | 13  | 6                  |
| Washington, DC         | 2.54             | 14  | 5                  |
| Minneapolis - St. Paul | 2.54             | 15  | 4                  |
| El Paso                | 2.44             | 16  | 3                  |
| New Orleans            | 2.09             | 17  | 2                  |
| Columbus               | 2.05             | 18  | 1                  |
| UNITED STATES          | 2.02             |     |                    |
| Los Angeles            | 1.91             | 19  | 1                  |
| Memphis                | 1.82             | 20  | 2                  |
| BOSTON                 | 1.80             | 21  | 3                  |
| San Francisco          | 1.76             | 22  | 4                  |
| Kansas City            | 1.63             | 23  | 5                  |
| Baltimore              | 1.40             | 24  | 6                  |
| Indianapolis           | 1.39             | 25  | 7                  |
| Cincinnati             | 1.14             | 26  | 8                  |
| St. Louis              | 1.12             | 27  | 9                  |
| Milwaukee              | 1.11             | 28  | 10                 |
| Philadelphia           | 0.53             | 29  | 11                 |
| Chicago                | 0.45             | 30  | 12                 |
| Detroit                | 0.17             | 31  | 13                 |
| Pittsburgh             | 0.10             | 32  | 14                 |
| Buffalo                | -0.06            | 33  | 15                 |
| Cleveland              | -0.07            | 34  | 16                 |
| New York               | -0.31            | 35  | 17                 |

Table 10B. Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, Manufacturing Excluded, 1969-84

|                       |       | RK.REL.    |    |
|-----------------------|-------|------------|----|
|                       | AnAvg | RK TO U.S. |    |
| Phoenix               | 6.29  | 1          | 14 |
| Houston               | 5.32  | 2          | 13 |
| San Jose              | 4.84  | 3          | 12 |
| Dallas                | 4.77  | 4          | 11 |
| Denver                | 4.68  | 5          | 10 |
| Atlanta               | 4.40  | 6          | 9  |
| Fort Worth            | 4.36  | 7          | 8  |
| San Diego             | 3.81  | 8          | 7  |
| Oklahoma City         | 3.70  | 9          | 6  |
| Seattle               | 3.37  | 10         | 5  |
| Nashville             | 3.28  | 11         | 4  |
| Minneapolis -St. Paul | 3.02  | 12         | 3  |
| San Antonio           | 2.84  | 13         | 2  |
| Columbus              | 2.78  | 14         | 1  |
| UNITED STATES         | 2.61  |            |    |
| Washington, DC        | 2.53  | 15         | 1  |
| New Orleans           | 2.49  | 16         | 2  |
| Los Angeles           | 2.47  | 17         | 3  |
| Jacksonville          | 2.41  | 18         | 4  |
| Memphis               | 2.36  | 19         | 5  |
| El Paso               | 2.28  | 20         | 6  |
| Indianapolis          | 2.19  | 21         | 7  |
| Kansas City           | 2.17  | 22         | 8  |
| Baltimore             | 2.16  | 23         | 9  |
| BOSTON                | 2.11  | 24         | 10 |
| Milwaukee             | 2.08  | 25         | 11 |
| San Francisco         | 2.01  | 26         | 12 |
| Cincinnati            | 1.93  | 27         | 13 |
| St. Louis             | 1.89  | 28         | 14 |
| Philadelphia          | 1.41  | 29         | 15 |
| Chicago               | 1.34  | 30         | 16 |
| Detroit               | 1.15  | 31         | 17 |
| Pittsburgh            | 1.08  | 32         | 18 |
| Buffalo               | 0.96  | 33         | 19 |
| Cleveland             | 0.89  | 34         | 20 |
| New York              | 0.31  | 35         | 21 |

Table 10C. Ranking of Metropolitan Areas on  
Annual Change in Non-farm Employment  
Services Excluded, 1969-84

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|----------------|--------------|
| Phoenix               | 5.33             | 1              | 17           |
| San Jose              | 4.65             | 2              | 16           |
| Houston               | 4.53             | 3              | 15           |
| Denver                | 3.87             | 4              | 14           |
| Dallas                | 3.83             | 5              | 13           |
| Atlanta               | 3.43             | 6              | 12           |
| Oklahoma City         | 3.35             | 7              | 11           |
| Fort Worth            | 3.20             | 8              | 10           |
| San Diego             | 3.11             | 9              | 9            |
| Jacksonville          | 2.69             | 10             | 8            |
| Nashville             | 2.47             | 11             | 7            |
| San Antonio           | 2.36             | 12             | 6            |
| El Paso               | 2.06             | 13             | 5            |
| Seattle               | 1.98             | 14             | 4            |
| Minneapolis -St. Paul | 1.88             | 15             | 3            |
| Washington, DC        | 1.74             | 16             | 2            |
| New Orleans           | 1.63             | 17             | 1            |
| UNITED STATES         | 1.52             |                |              |
| Columbus              | 1.43             | 18             | 1            |
| Memphis               | 1.28             | 19             | 2            |
| Los Angeles           | 1.27             | 20             | 3            |
| BOSTON                | 1.14             | 21             | 4            |
| Kansas City           | 1.04             | 22             | 5            |
| San Francisco         | 0.88             | 23             | 6            |
| Baltimore             | 0.72             | 24             | 7            |
| Indianapolis          | 0.72             | 25             | 8            |
| Cincinnati            | 0.54             | 26             | 9            |
| St. Louis             | 0.42             | 27             | 10           |
| Milwaukee             | 0.33             | 28             | 11           |
| Philadelphia          | -0.23            | 29             | 12           |
| Chicago               | -0.31            | 30             | 13           |
| Detroit               | -0.58            | 31             | 14           |
| Pittsburgh            | -0.69            | 32             | 15           |
| Cleveland             | -0.76            | 33             | 16           |
| Buffalo               | -0.95            | 34             | 17           |
| New York              | -1.10            | 35             | 18           |

Table 10D. Ranking of Metropolitan Areas on  
Average Annual Change in Manufacturing  
Employment, 1969-84

|                      | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rk.Rel. |
|----------------------|------------------|----------------|---------|
| San Jose             | 5.64             | 1              | 16      |
| San Diego            | 3.63             | 2              | 15      |
| Phoenix              | 3.41             | 3              | 14      |
| El Paso              | 3.31             | 4              | 13      |
| Washington, DC       | 2.78             | 5              | 12      |
| Oklahoma City        | 2.59             | 6              | 11      |
| San Antonio          | 2.48             | 7              | 10      |
| Denver               | 1.97             | 8              | 9       |
| Dallas               | 1.76             | 9              | 8       |
| Houston              | 1.69             | 10             | 7       |
| Nashville            | 1.20             | 11             | 6       |
| Fort Worth           | 0.89             | 12             | 5       |
| Minneapolis -St.Paul | 0.86             | 13             | 4       |
| BOSTON               | 0.62             | 14             | 3       |
| Atlanta              | 0.57             | 15             | 2       |
| Los Angeles          | 0.10             | 16             | 1       |
| UNITED STATES        | -0.24            |                |         |
| Seattle              | -0.34            | 17             | 1       |
| San Francisco        | -0.53            | 18             | 2       |
| Kansas City          | -0.79            | 19             | 3       |
| COLUMBUS             | -0.86            | 20             | 4       |
| MEMPHIS              | -1.00            | 21             | 5       |
| CINCINNATI           | -1.18            | 22             | 6       |
| MILWAUKEE            | -1.32            | 23             | 7       |
| INDIANAPOLIS         | -1.40            | 24             | 8       |
| NEW ORLEANS          | -1.51            | 25             | 9       |
| ST. LOUIS            | -1.51            | 26             | 10      |
| DETROIT              | -2.14            | 27             | 11      |
| BALTIMORE            | -2.36            | 28             | 12      |
| CHICAGO              | -2.37            | 29             | 13      |
| PHILADELPHIA         | -2.49            | 30             | 14      |
| CLEVELAND            | -2.59            | 31             | 15      |
| BUFFALO              | -3.35            | 32             | 16      |
| PITTSBURGH           | -3.54            | 33             | 17      |
| NEW YORK             | -3.65            | 34             | 18      |
| JACKSONVILLE         | NA               |                |         |



Table 10E. Ranking of Metropolitan Areas on  
Average Annual Change in Retail Trade  
Employment, 1969-84

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|----------------|--------------|
| Phoenix               | 5.88             | 1              | 19           |
| Houston               | 5.09             | 2              | 18           |
| San Diego             | 4.92             | 3              | 17           |
| Fort Worth            | 4.85             | 4              | 16           |
| Dallas                | 4.62             | 5              | 15           |
| Atlanta               | 4.59             | 6              | 14           |
| Nashville             | 4.47             | 7              | 13           |
| San Jose              | 4.32             | 8              | 12           |
| Denver                | 4.25             | 9              | 11           |
| San Antonio           | 4.17             | 10             | 10           |
| Oklahoma City         | 4.11             | 11             | 9            |
| Jacksonville          | 3.78             | 12             | 8            |
| Seattle               | 3.51             | 13             | 7            |
| El Paso               | 3.27             | 14             | 6            |
| New Orleans           | 3.20             | 15             | 5            |
| Memphis               | 3.12             | 16             | 4            |
| Minneapolis -St. Paul | 2.92             | 17             | 3            |
| Washington, DC        | 2.76             | 18             | 2            |
| Columbus              | 2.67             | 19             | 1            |
| UNITED STATES         | 2.52             |                |              |
| San Francisco         | 2.40             | 20             | 1            |
| Cincinnati            | 2.24             | 21             | 2            |
| Indianapolis          | 2.14             | 22             | 3            |
| Baltimore             | 2.02             | 23             | 4            |
| Indianapolis          | 1.91             | 24             | 5            |
| Los Angeles           | 1.90             | 25             | 6            |
| St. Louis             | 1.67             | 26             | 7            |
| BOSTON                | 1.53             | 27             | 8            |
| Philadelphia          | 1.24             | 28             | 9            |
| Pittsburgh            | 1.09             | 29             | 10           |
| Detroit               | 1.07             | 30             | 11           |
| Milwaukee             | 1.00             | 31             | 12           |
| Chicago               | 0.73             | 32             | 13           |
| Cleveland             | 0.53             | 33             | 14           |
| Buffalo               | 0.42             | 34             | 15           |
| New York              | -0.72            | 35             | 16           |

Table 10F. Ranking of Metropolitan Areas on  
Average Annual Change in F.I.R.E.  
Employment, 1969-84

|                       | AvgAn.<br>% Chg. | Rk.to U.S. | Rk.Rel. |
|-----------------------|------------------|------------|---------|
| Phoenix               | 7.94             | 1          | 15      |
| San Diego             | 7.46             | 2          | 14      |
| Houston               | 7.13             | 3          | 13      |
| Denver                | 6.63             | 4          | 12      |
| San Jose              | 5.89             | 5          | 11      |
| Fort Worth            | 5.87             | 6          | 10      |
| El Paso               | 5.77             | 7          | 9       |
| Dallas                | 5.70             | 8          | 8       |
| San Antonio           | 5.68             | 9          | 7       |
| Oklahoma City         | 5.19             | 10         | 6       |
| Atlanta               | 5.08             | 11         | 5       |
| Jacksonville          | 4.39             | 12         | 4       |
| Columbus              | 4.29             | 13         | 3       |
| Memphis               | 4.27             | 14         | 2       |
| Minneapolis -St. Paul | 4.27             | 15         | 1       |
| UNITED STATES         | 3.95             |            |         |
| Seattle               | 3.78             | 16         | 1       |
| Milwaukee             | 3.77             | 17         | 2       |
| Washington, DC        | 3.74             | 18         | 3       |
| New Orleans           | 3.64             | 19         | 4       |
| Baltimore             | 3.40             | 20         | 5       |
| Los Angeles           | 3.38             | 21         | 6       |
| Nashville             | 3.36             | 22         | 7       |
| Kansas City           | 3.25             | 23         | 8       |
| San Francisco         | 3.23             | 24         | 9       |
| Indianapolis          | 2.55             | 25         | 10      |
| Philadelphia          | 2.50             | 26         | 11      |
| Chicago               | 2.44             | 27         | 12      |
| Pittsburgh            | 2.39             | 28         | 13      |
| St. Louis             | 2.37             | 29         | 14      |
| BOSTON                | 2.35             | 30         | 15      |
| Cincinnati            | 2.30             | 31         | 16      |
| Buffalo               | 2.26             | 32         | 17      |
| Cleveland             | 1.70             | 33         | 18      |
| Detroit               | 1.51             | 34         | 19      |
| New York              | 0.66             | 35         | 20      |

Table 10G. Ranking of Metropolitan Areas on  
Average Annual Change in Services  
Employment, 1969-84

|                       | AvgAn.<br>% Chg. | Rk. | Rk.Rel.<br>to U.S. |
|-----------------------|------------------|-----|--------------------|
| Phoenix               | 7.38             | 1   | 23                 |
| San Jose              | 6.43             | 2   | 22                 |
| San Diego             | 6.43             | 3   | 21                 |
| Denver                | 5.98             | 4   | 20                 |
| Houston               | 5.82             | 5   | 19                 |
| Dallas                | 5.54             | 6   | 18                 |
| Atlanta               | 5.07             | 7   | 17                 |
| Seattle               | 4.98             | 8   | 16                 |
| Minneapolis -St. Paul | 4.89             | 9   | 15                 |
| Fort Worth            | 4.83             | 10  | 14                 |
| Washington, DC        | 4.73             | 11  | 13                 |
| San Antonio           | 4.62             | 12  | 12                 |
| Oklahoma City         | 4.54             | 13  | 11                 |
| Columbus              | 4.41             | 14  | 10                 |
| El Paso               | 4.36             | 15  | 9                  |
| Jacksonville          | 4.30             | 16  | 8                  |
| Indianapolis          | 4.21             | 17  | 7                  |
| Nashville             | 4.15             | 18  | 6                  |
| San Francisco         | 4.14             | 19  | 5                  |
| Milwaukee             | 3.94             | 20  | 4                  |
| Baltimore             | 3.86             | 21  | 3                  |
| Kansas City           | 3.84             | 22  | 2                  |
| Los Angeles           | 3.84             | 23  | 1                  |
| UNITED STATES         | 3.83             |     |                    |
| Memphis               | 3.75             | 24  | 1                  |
| BOSTON                | 3.59             | 25  | 2                  |
| New Orleans           | 3.45             | 26  | 3                  |
| St. Louis             | 3.38             | 27  | 4                  |
| Buffalo               | 3.27             | 28  | 5                  |
| Cincinnati            | 3.27             | 29  | 6                  |
| Chicago               | 3.09             | 30  | 7                  |
| Detroit               | 3.02             | 31  | 8                  |
| Philadelphia          | 2.99             | 32  | 9                  |
| Pittsburgh            | 2.47             | 33  | 10                 |
| Cleveland             | 2.47             | 34  | 11                 |
| New York              | 1.72             | 35  | 12                 |

Table 11A . Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, 1969-72

|                        | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rk.Rel.<br>to U.S. |
|------------------------|------------------|----------------|--------------------|
| Phoenix                | 6.56             | 1              | 15                 |
| Denver                 | 5.26             | 2              | 14                 |
| Oklahoma City          | 3.99             | 3              | 13                 |
| Houston                | 3.86             | 4              | 12                 |
| Atlanta                | 3.85             | 5              | 11                 |
| Memphis                | 3.40             | 6              | 10                 |
| San Jose               | 2.94             | 7              | 9                  |
| Colombus               | 2.89             | 8              | 8                  |
| Jacksonville           | 2.81             | 9              | 7                  |
| Nashville              | 2.57             | 10             | 6                  |
| Washington, DC         | 2.53             | 11             | 5                  |
| Dallas                 | 2.13             | 12             | 4                  |
| San Antonio            | 1.74             | 13             | 3                  |
| New Orleans            | 1.50             | 14             | 2                  |
| Minneapolis - St. Paul | 1.50             | 15             | 1                  |
| UNITED STATES          | 1.28             |                |                    |
| San Diego              | 1.06             | 16             | 1                  |
| Kansas City            | 0.81             | 17             | 2                  |
| Baltimore              | 0.75             | 18             | 3                  |
| Milwaukee              | 0.50             | 19             | 4                  |
| BOSTON                 | 0.25             | 20             | 5                  |
| Indianapolis           | 0.22             | 21             | 6                  |
| Cincinnati             | 0.07             | 22             | 7                  |
| Fort Worth             | -0.09            | 23             | 8                  |
| Los Angeles            | -0.09            | 24             | 9                  |
| Detroit                | -0.17            | 25             | 10                 |
| El Paso                | -0.18            | 26             | 11                 |
| St. Louis              | -0.24            | 27             | 12                 |
| Philadelphia           | -0.30            | 28             | 13                 |
| Buffalo                | -0.57            | 29             | 14                 |
| Pittsburgh             | -0.63            | 30             | 15                 |
| San Francisco          | -0.80            | 31             | 16                 |
| Chicago                | -0.91            | 32             | 17                 |
| Cleveland              | -1.51            | 33             | 18                 |
| New York               | -1.78            | 34             | 19                 |
| Seattle                | -2.66            | 35             | 20                 |



Table 11B. Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, Manufacturing Excluded, 1969-72

|                        | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|------------------------|------------------|----------------|--------------|
| Phoenix                | 8.04             | 1              | 13           |
| Denver                 | 5.42             | 2              | 12           |
| Atlanta                | 5.42             | 3              | 11           |
| Houston                | 4.42             | 4              | 10           |
| San Jose               | 4.37             | 5              | 9            |
| Memphis                | 4.33             | 6              | 8            |
| Columbus               | 4.24             | 7              | 7            |
| Oklahoma City          | 3.99             | 8              | 6            |
| Dallas                 | 3.51             | 9              | 5            |
| Minneapolis - St. Paul | 3.06             | 10             | 4            |
| Fort Worth             | 2.86             | 11             | 3            |
| Nashville              | 2.84             | 12             | 2            |
| Washington, DC         | 2.62             | 13             | 1            |
| UNITED STATES          | 2.27             |                |              |
| Baltimore              | 2.18             | 14             | 1            |
| Milwaukee              | 2.03             | 15             | 2            |
| New Orleans            | 1.99             | 16             | 3            |
| San Antonio            | 1.88             | 17             | 4            |
| Kansas City            | 1.82             | 18             | 5            |
| San Diego              | 1.61             | 19             | 6            |
| Detroit                | 1.57             | 20             | 7            |
| Indianapolis           | 1.56             | 21             | 8            |
| Boston                 | 1.51             | 22             | 9            |
| Cincinnati             | 1.45             | 23             | 10           |
| Philadelphia           | 1.31             | 24             | 11           |
| Los Angeles            | 1.26             | 25             | 12           |
| Buffalo                | 1.25             | 26             | 13           |
| St. Louis              | 0.83             | 27             | 14           |
| Pittsburgh             | 0.50             | 28             | 15           |
| Seattle                | 0.24             | 29             | 16           |
| Chicago                | 0.07             | 30             | 17           |
| Cleveland              | 0.05             | 31             | 18           |
| San Francisco          | -0.32            | 32             | 19           |
| New York               | -0.77            | 33             | 20           |
| Jacksonville           | -0.80            | 34             | 21           |
| El Paso                | -1.07            | 35             | 22           |

Table 11C. Ranking of Metropolitan Areas on  
Annual Change in Non-farm Employment  
Services Excluded, 1969-72

|                        | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|------------------------|------------------|----------------|--------------|
| Phoenix                | 6.31             | 1              | 14           |
| Denver                 | 5.06             | 2              | 13           |
| Oklahoma City          | 4.00             | 3              | 12           |
| Atlanta                | 3.83             | 4              | 11           |
| Houston                | 3.73             | 5              | 10           |
| Memphis                | 3.01             | 6              | 9            |
| Nashville              | 2.42             | 7              | 8            |
| San Jose               | 2.38             | 8              | 7            |
| Jacksonville           | 2.38             | 9              | 6            |
| Washington, DC         | 2.36             | 10             | 5            |
| Columbus               | 2.01             | 11             | 4            |
| Dallas                 | 1.89             | 12             | 3            |
| New Orleans            | 1.28             | 13             | 2            |
| San Antonio            | 1.22             | 14             | 1            |
| UNITED STATES          | 0.83             |                |              |
| Minneapolis - St. Paul | 0.70             | 15             | 1            |
| Kansas City            | 0.59             | 16             | 2            |
| Baltimore              | 0.10             | 17             | 3            |
| San Diego              | -0.05            | 18             | 4            |
| Milwaukee              | -0.20            | 19             | 5            |
| BOSTON                 | -0.21            | 20             | 6            |
| Indianapolis           | -0.40            | 21             | 7            |
| Los Angeles            | -0.56            | 22             | 8            |
| Cincinnati             | -0.68            | 23             | 9            |
| Pittsburgh             | -0.79            | 24             | 10           |
| Fort Worth             | -0.80            | 25             | 11           |
| Detroit                | -0.84            | 26             | 12           |
| El Paso                | -0.93            | 27             | 13           |
| St. Louis              | -1.03            | 28             | 14           |
| Philadelphia           | -1.03            | 29             | 15           |
| Chicago                | -1.23            | 30             | 16           |
| San Francisco          | -1.53            | 31             | 17           |
| Buffalo                | -1.66            | 32             | 18           |
| New York               | -2.24            | 33             | 19           |
| Cleveland              | -2.30            | 34             | 20           |
| Seattle                | -3.99            | 35             | 21           |

Table 11D. Ranking of Metropolitan Areas on  
Average Annual Change in Manufacturing  
Employment, 1969-72

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|----------------|--------------|
| El Paso               | 4.65             | 1              | 12           |
| Denver                | 4.30             | 2              | 11           |
| Oklahoma City         | 4.01             | 3              | 10           |
| Asheville             | 1.64             | 4              | 9            |
| Houston               | 0.98             | 5              | 8            |
| San Antonio           | 0.39             | 6              | 7            |
| Phoenix               | 0.05             | 7              | 6            |
| Washington, DC        | -0.15            | 8              | 5            |
| San Jose              | -0.57            | 9              | 4            |
| Memphis               | -0.64            | 10             | 3            |
| Columbus              | -1.55            | 11             | 2            |
| New Orleans           | -1.90            | 12             | 1            |
| UNITED STATES         | -1.96            |                |              |
| Milwaukee             | -2.69            | 13             | 1            |
| Atlanta               | -2.83            | 14             | 2            |
| Dallas                | -3.07            | 15             | 3            |
| Kansas City           | -3.09            | 16             | 4            |
| St. Louis             | -3.24            | 17             | 5            |
| San Diego             | -3.32            | 18             | 6            |
| Cincinnati            | -3.39            | 19             | 7            |
| Chicago               | -3.41            | 20             | 8            |
| Minneapolis -St. Paul | -3.49            | 21             | 9            |
| Indianapolis          | -3.59            | 22             | 10           |
| Detroit               | -3.63            | 23             | 11           |
| Pittsburgh            | -3.82            | 24             | 12           |
| Los Angeles           | -3.97            | 25             | 13           |
| BOSTON                | -4.22            | 26             | 14           |
| San Francisco         | -4.68            | 27             | 15           |
| Philadelphia          | -4.81            | 28             | 16           |
| Baltimore             | -4.87            | 29             | 17           |
| Cleveland             | -4.89            | 30             | 18           |
| Buffalo               | -5.22            | 31             | 19           |
| New York              | -6.11            | 32             | 20           |
| Fort Worth            | -8.39            | 33             | 21           |
| Seattle               | -12.63           | 34             | 22           |
| Jacksonville          | ERR              |                |              |

Table 11E. Ranking of Metropolitan Areas on  
Average Annual Change in Retail Trade  
Employment, 1969-72

|                       | AvgAn.<br>% Chg. | Rk.Rel.<br>Rk.to U.S. |    |
|-----------------------|------------------|-----------------------|----|
| Memphis               | 6.28             | 1                     | 19 |
| Denver                | 6.25             | 2                     | 18 |
| Oklahoma City         | 6.21             | 3                     | 17 |
| Atlanta               | 6.15             | 4                     | 16 |
| Phoenix               | 5.98             | 5                     | 15 |
| Nashville             | 5.41             | 6                     | 14 |
| San Jose              | 4.53             | 7                     | 13 |
| Jacksonville          | 4.38             | 8                     | 12 |
| Houston               | 4.02             | 9                     | 11 |
| San Diego             | 3.95             | 10                    | 10 |
| El Paso               | 3.61             | 11                    | 9  |
| Fort Worth            | 3.38             | 12                    | 8  |
| Washington, DC        | 3.36             | 13                    | 7  |
| San Antonio           | 3.27             | 14                    | 6  |
| Dallas                | 3.15             | 15                    | 5  |
| Columbus              | 3.08             | 16                    | 4  |
| Baltimore             | 2.49             | 17                    | 3  |
| Kansas City           | 2.34             | 18                    | 2  |
| Minneapolis -St. Paul | 2.33             | 19                    | 1  |
| UNITED STATES         | 2.29             |                       |    |
| New Orleans           | 2.26             | 20                    | 1  |
| Milwaukee             | 1.97             | 21                    | 2  |
| Cincinnati            | 1.56             | 22                    | 3  |
| Philadelphia          | 1.13             | 23                    | 4  |
| Los Angeles           | 1.10             | 24                    | 5  |
| Indianapolis          | 0.98             | 25                    | 6  |
| BOSTON                | 0.87             | 26                    | 7  |
| Pittsburgh            | 0.83             | 27                    | 8  |
| St. Louis             | 0.79             | 28                    | 9  |
| Detroit               | 0.67             | 29                    | 10 |
| Buffalo               | -0.10            | 30                    | 11 |
| Cleveland             | -0.26            | 31                    | 12 |
| Chicago               | -0.53            | 32                    | 13 |
| San Francisco         | -0.65            | 33                    | 14 |
| Seattle               | -1.44            | 34                    | 15 |
| New York              | -2.20            | 35                    | 16 |



Table 11F. Ranking of Metropolitan Areas on  
Average Annual Change in F.I.R.E.  
Employment, 1969-72

|                       | AvgAn.<br>% Chg. | Rk.<br>Rk.to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|-------------------|--------------|
| San Diego             | 13.09            | 1                 | 15           |
| Phoenix               | 12.67            | 2                 | 14           |
| El Paso               | 10.09            | 3                 | 13           |
| Atlanta               | 9.72             | 4                 | 12           |
| San Jose              | 8.92             | 5                 | 11           |
| Houston               | 8.75             | 6                 | 10           |
| Oklahoma City         | 8.55             | 7                 | 9            |
| Jacksonville          | 8.04             | 8                 | 8            |
| Memphis               | 7.79             | 9                 | 7            |
| Denver                | 7.02             | 10                | 6            |
| San Antonio           | 6.87             | 11                | 5            |
| Fort Worth            | 6.85             | 12                | 4            |
| Columbus              | 6.35             | 13                | 3            |
| Washington, DC        | 5.51             | 14                | 2            |
| Dallas                | 5.43             | 15                | 1            |
| UNITED STATES         | 4.55             |                   |              |
| Minneapolis -St. Paul | 4.42             | 16                | 1            |
| New Orleans           | 4.09             | 17                | 2            |
| Philadelphia          | 3.93             | 18                | 3            |
| Baltimore             | 3.88             | 19                | 4            |
| Milwaukee             | 3.88             | 20                | 5            |
| Los Angeles           | 3.40             | 21                | 6            |
| Pittsburgh            | 3.35             | 22                | 7            |
| Kansas City           | 3.22             | 23                | 8            |
| Detroit               | 3.00             | 24                | 9            |
| Buffalo               | 2.80             | 25                | 10           |
| Nashville             | 2.50             | 26                | 11           |
| Cleveland             | 2.49             | 27                | 12           |
| Cincinnati            | 2.38             | 28                | 13           |
| BOSTON                | 1.78             | 29                | 14           |
| San Francisco         | 1.76             | 30                | 15           |
| Chicago               | 1.53             | 31                | 16           |
| Indianapolis          | 1.52             | 32                | 17           |
| St. Louis             | 0.30             | 33                | 18           |
| Seattle               | -0.40            | 34                | 19           |
| New York              | -0.97            | 35                | 20           |

Table 11G. Ranking of Metropolitan Areas on  
Average Annual Change in Services  
Employment, 1969-72

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rk.Rel. |
|-----------------------|------------------|----------------|---------|
| Phoenix               | 7.51             | 1              | 18      |
| Columbus              | 6.85             | 2              | 17      |
| San Diego             | 6.20             | 3              | 16      |
| Denver                | 6.02             | 4              | 15      |
| Memphis               | 5.01             | 5              | 14      |
| Minneapolis - St.Paul | 4.86             | 6              | 13      |
| San Jose              | 4.84             | 7              | 12      |
| Buffalo               | 4.64             | 8              | 11      |
| Jacksonville          | 4.62             | 9              | 10      |
| Houston               | 4.34             | 10             | 9       |
| San Antonio           | 4.09             | 11             | 8       |
| Oklahoma City         | 3.97             | 12             | 7       |
| Atlanta               | 3.94             | 13             | 6       |
| El Paso               | 3.93             | 14             | 5       |
| Milwaukee             | 3.64             | 15             | 4       |
| Baltimore             | 3.59             | 16             | 3       |
| Indianapolis          | 3.47             | 17             | 2       |
| Cincinnati            | 3.17             | 18             | 1       |
| UNITED STATES         | 3.15             |                |         |
| Nashville             | 3.12             | 19             | 1       |
| Washington, DC        | 3.10             | 20             | 2       |
| Dallas                | 3.10             | 21             | 3       |
| Seattle               | 3.06             | 22             | 4       |
| Detroit               | 2.96             | 23             | 5       |
| Fort Worth            | 2.93             | 24             | 6       |
| St. Louis             | 2.78             | 25             | 7       |
| Philadelphia          | 2.54             | 26             | 8       |
| New Orleans           | 2.25             | 27             | 9       |
| Cleveland             | 1.96             | 28             | 10      |
| Kansas City           | 1.79             | 29             | 11      |
| BOSTON                | 1.70             | 30             | 12      |
| San Francisco         | 1.62             | 31             | 13      |
| Los Angeles           | 1.58             | 32             | 14      |
| Chicago               | 0.48             | 33             | 15      |
| Pittsburgh            | -0.02            | 34             | 16      |
| New York              | -0.37            | 35             | 17      |

Table 12A. Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, 1972-78

|                       | AvgAn.<br>% Chg. | Rk. | Rk.Rel.<br>to U.S. |
|-----------------------|------------------|-----|--------------------|
| Houston               | 6.69             | 1   | 16                 |
| San Jose              | 6.16             | 2   | 15                 |
| Phoenix               | 5.84             | 3   | 14                 |
| San Diego             | 5.66             | 4   | 13                 |
| Seattle               | 5.06             | 5   | 12                 |
| Fort Worth            | 4.65             | 6   | 11                 |
| Denver                | 4.35             | 7   | 10                 |
| El Paso               | 4.08             | 8   | 9                  |
| Dallas                | 4.07             | 9   | 8                  |
| Oklahoma City         | 3.40             | 10  | 7                  |
| Jacksonville          | 3.19             | 11  | 6                  |
| Nashville             | 3.15             | 12  | 5                  |
| Minneapolis - St.Paul | 3.14             | 13  | 4                  |
| New Orleans           | 3.09             | 14  | 3                  |
| Atlanta               | 3.09             | 15  | 2                  |
| Los Angeles           | 2.84             | 16  | 1                  |
| UNITED STATES         | 2.63             |     |                    |
| Kansas City           | 2.55             | 17  | 1                  |
| San Francisco         | 2.46             | 18  | 2                  |
| Indianapolis          | 2.41             | 19  | 3                  |
| Washington, DC        | 2.37             | 20  | 4                  |
| Milwaukee             | 2.23             | 21  | 5                  |
| Colombus              | 2.22             | 22  | 6                  |
| Cincinnati            | 2.20             | 23  | 7                  |
| San Antonio           | 2.17             | 24  | 8                  |
| Memphis               | 1.92             | 25  | 9                  |
| Baltimore             | 1.81             | 26  | 10                 |
| St. Louis             | 1.78             | 27  | 11                 |
| Detroit               | 1.65             | 28  | 12                 |
| BOSTON                | 1.46             | 29  | 13                 |
| Chicago               | 1.43             | 30  | 14                 |
| Cleveland             | 1.27             | 31  | 15                 |
| Pittsburgh            | 1.24             | 32  | 16                 |
| Buffalo               | 0.43             | 33  | 17                 |
| Philadelphia          | 0.26             | 34  | 18                 |
| New York              | -1.17            | 35  | 19                 |

Table 12B. Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, Manufacturing Excluded, 1972-78

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|----------------|--------------|
| Houston               | 6.87             | 1              | 16           |
| Phoenix               | 6.23             | 2              | 15           |
| San Diego             | 5.59             | 3              | 14           |
| San Jose              | 5.38             | 4              | 13           |
| Seattle               | 4.99             | 5              | 12           |
| Denver                | 4.74             | 6              | 11           |
| Fort Worth            | 4.63             | 7              | 10           |
| El Paso               | 4.39             | 8              | 9            |
| Dallas                | 4.31             | 9              | 8            |
| Nashville             | 3.73             | 10             | 7            |
| Atlanta               | 3.55             | 11             | 6            |
| Oklahoma City         | 3.53             | 12             | 5            |
| New Orleans           | 3.45             | 13             | 4            |
| Minneapolis -St. Paul | 3.33             | 14             | 3            |
| Jacksonville          | 3.32             | 15             | 2            |
| Los Angeles           | 3.09             | 16             | 1            |
| UNITED STATES         | 2.99             |                |              |
| Kansas City           | 2.90             | 17             | 1            |
| Indianapolis          | 2.84             | 18             | 2            |
| Columbus              | 2.69             | 19             | 3            |
| San Francisco         | 2.67             | 20             | 4            |
| Milwaukee             | 2.63             | 21             | 5            |
| Cincinnati            | 2.48             | 22             | 6            |
| Baltimore             | 2.41             | 23             | 7            |
| Washington, DC        | 2.37             | 24             | 8            |
| St. Louis             | 2.29             | 25             | 9            |
| Memphis               | 2.23             | 26             | 10           |
| Chicago               | 2.08             | 27             | 11           |
| San Antonio           | 1.94             | 28             | 12           |
| Detroit               | 1.84             | 29             | 13           |
| Pittsburgh            | 1.78             | 30             | 14           |
| Cleveland             | 1.66             | 31             | 15           |
| BOSTON                | 1.35             | 32             | 16           |
| Buffalo               | 0.88             | 33             | 17           |
| Philadelphia          | 0.83             | 34             | 18           |
| New York              | -0.79            | 35             | 19           |



Table 12C. Ranking of Metropolitan Areas on  
Annual Change in Non-farm Employment  
Services Excluded, 1972-78

|                      | AvgAn.<br>% Chg. | Rk.Rel.<br>Rk.to U.S. |    |
|----------------------|------------------|-----------------------|----|
| San Diego            | 9.59             | 1                     | 15 |
| Denver               | 8.49             | 2                     | 14 |
| Minneapolis -St.Paul | 7.13             | 3                     | 13 |
| Houston              | 6.61             | 4                     | 12 |
| San Jose             | 5.86             | 5                     | 11 |
| Phoenix              | 5.62             | 6                     | 10 |
| Seattle              | 4.89             | 7                     | 9  |
| Fort Worth           | 4.50             | 8                     | 8  |
| El Paso              | 3.90             | 9                     | 7  |
| Dallas               | 3.89             | 10                    | 6  |
| Jacksonville         | 3.27             | 11                    | 5  |
| Oklahoma City        | 2.96             | 12                    | 4  |
| New Orleans          | 2.95             | 13                    | 3  |
| Nashville            | 2.89             | 14                    | 2  |
| Atlanta              | 2.55             | 15                    | 1  |
| UNITED STATES        | 2.33             |                       |    |
| Los Angeles          | 2.29             | 16                    | 1  |
| Kansas City          | 2.01             | 17                    | 2  |
| Cincinnati           | 1.95             | 18                    | 3  |
| Indianapolis         | 1.94             | 19                    | 4  |
| Columbus             | 1.87             | 20                    | 5  |
| San Antonio          | 1.83             | 21                    | 6  |
| San Francisco        | 1.63             | 22                    | 7  |
| Washington, DC       | 1.63             | 23                    | 8  |
| Milwaukee            | 1.58             | 24                    | 9  |
| Memphis              | 1.48             | 25                    | 10 |
| Baltimore            | 1.48             | 26                    | 11 |
| St. Louis            | 1.38             | 27                    | 12 |
| Detroit              | 1.26             | 28                    | 13 |
| Cleveland            | 0.97             | 29                    | 14 |
| Chicago              | 0.83             | 30                    | 15 |
| BOSTON               | 0.81             | 31                    | 16 |
| Pittsburgh           | 0.69             | 32                    | 17 |
| Buffalo              | -0.11            | 33                    | 18 |
| Philadelphia         | -0.30            | 34                    | 19 |
| New York             | -1.94            | 35                    | 20 |

Table 12D. Ranking of Metropolitan Areas on  
Average Annual Change in Manufacturing  
Employment, 1972-78

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|----------------|--------------|
| San Jose              | 8.12             | 1              | 17           |
| San Diego             | 6.29             | 2              | 16           |
| Houston               | 5.63             | 3              | 15           |
| Seattle               | 5.39             | 4              | 14           |
| Fort Worth            | 4.72             | 5              | 13           |
| San Antonio           | 4.27             | 6              | 12           |
| Phoenix               | 3.73             | 7              | 11           |
| Dallas                | 3.04             | 8              | 10           |
| El Paso               | 2.51             | 9              | 9            |
| Minneapolis -St. Paul | 2.45             | 10             | 8            |
| Oklahoma City         | 2.39             | 11             | 7            |
| Washington, DC        | 2.11             | 12             | 6            |
| Los Angeles           | 2.02             | 13             | 5            |
| Jacksonville          | 1.95             | 14             | 4            |
| BOSTON                | 1.87             | 15             | 3            |
| Denver                | 1.81             | 16             | 2            |
| Cincinnati            | 1.38             | 17             | 1            |
| UNITED STATES         | 1.32             |                |              |
| Milwaukee             | 1.27             | 18             | 1            |
| Detroit               | 1.22             | 19             | 2            |
| Indianapolis          | 1.00             | 20             | 3            |
| Nashville             | 0.98             | 21             | 4            |
| Kansas City           | 0.96             | 22             | 5            |
| Atlanta               | 0.57             | 23             | 6            |
| San Francisco         | 0.53             | 24             | 7            |
| Memphis               | 0.40             | 25             | 8            |
| Columbus              | 0.38             | 26             | 9            |
| Cleveland             | 0.28             | 27             | 10           |
| St. Louis             | 0.16             | 28             | 11           |
| New Orleans           | 0.13             | 29             | 12           |
| Chicago               | -0.47            | 30             | 13           |
| Pittsburgh            | -0.51            | 31             | 14           |
| Buffalo               | -0.91            | 32             | 15           |
| Baltimore             | -1.16            | 33             | 16           |
| Philadelphia          | -1.67            | 34             | 17           |
| New York              | -3.12            | 35             | 18           |

Table 12E. Ranking of Metropolitan Areas on  
Average Annual Change in Retail Trade  
Employment, 1972-78

|                        | AvgAn.<br>% Chg. | Rk.Rel.<br>Rk.to U.S. |    |
|------------------------|------------------|-----------------------|----|
| Phoenix                | 6.73             | 1                     | 20 |
| San Diego              | 6.70             | 2                     | 19 |
| Houston                | 6.26             | 3                     | 18 |
| Seattle                | 6.18             | 4                     | 17 |
| San Jose               | 5.50             | 5                     | 16 |
| Fort Worth             | 5.07             | 6                     | 15 |
| El Paso                | 4.98             | 7                     | 14 |
| Nashville              | 4.56             | 8                     | 13 |
| Dallas                 | 4.44             | 9                     | 12 |
| Memphis                | 4.22             | 10                    | 11 |
| New Orleans            | 4.20             | 11                    | 10 |
| San Antonio            | 4.02             | 12                    | 9  |
| Oklahoma City          | 3.93             | 13                    | 8  |
| Denver                 | 3.87             | 14                    | 7  |
| Minneapolis - St. Paul | 3.85             | 15                    | 6  |
| Jacksonville           | 3.64             | 16                    | 5  |
| Indianapolis           | 3.62             | 17                    | 4  |
| Atlanta                | 3.54             | 18                    | 3  |
| San Francisco          | 3.47             | 19                    | 2  |
| Columbus               | 3.46             | 20                    | 1  |
| UNITED STATES          | 2.98             |                       |    |
| Cincinnati             | 2.97             | 21                    | 1  |
| Kansas City            | 2.84             | 22                    | 2  |
| Los Angeles            | 2.47             | 23                    | 3  |
| Washington, DC         | 2.46             | 24                    | 4  |
| Detroit                | 2.40             | 25                    | 5  |
| St. Louis              | 2.27             | 26                    | 6  |
| Chicago                | 1.88             | 27                    | 7  |
| Cleveland              | 1.87             | 28                    | 8  |
| Pittsburgh             | 1.86             | 29                    | 9  |
| Baltimore              | 1.58             | 30                    | 10 |
| Milwaukee              | 1.43             | 31                    | 11 |
| Philadelphia           | 1.31             | 32                    | 12 |
| Buffalo                | 1.07             | 33                    | 13 |
| BOSTON                 | 0.67             | 34                    | 14 |
| New York               | -1.62            | 35                    | 15 |

Table 12F. Ranking of Metropolitan Areas on  
Average Annual Change in F.I.R.E.  
Employment, 1972-78

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rk.Rel. |
|-----------------------|------------------|----------------|---------|
| San Diego             | 7.23             | 1              | 15      |
| Phoenix               | 6.94             | 2              | 14      |
| Houston               | 6.63             | 3              | 13      |
| Seattle               | 5.86             | 4              | 12      |
| San Jose              | 5.38             | 5              | 11      |
| Denver                | 5.33             | 6              | 10      |
| Fort Worth            | 5.19             | 7              | 9       |
| Jacksonville          | 4.99             | 8              | 8       |
| New Orleans           | 4.90             | 9              | 7       |
| El Paso               | 4.76             | 10             | 6       |
| Milwaukee             | 4.72             | 11             | 5       |
| San Antonio           | 4.53             | 12             | 4       |
| Oklahoma City         | 4.20             | 13             | 3       |
| Kansas City           | 4.14             | 14             | 2       |
| Dallas                | 4.11             | 15             | 1       |
| UNITED STATES         | 4.00             |                |         |
| San Francisco         | 4.00             | 16             | 1       |
| Nashville             | 4.00             | 17             | 2       |
| Minneapolis - St.Paul | 3.96             | 18             | 3       |
| Baltimore             | 3.75             | 19             | 4       |
| Los Angeles           | 3.68             | 20             | 5       |
| St. Louis             | 3.47             | 21             | 6       |
| Indianapolis          | 3.43             | 22             | 7       |
| Chicago               | 3.42             | 23             | 8       |
| Washington, DC        | 3.41             | 24             | 9       |
| Atlanta               | 3.28             | 25             | 10      |
| Columbus              | 3.23             | 26             | 11      |
| Memphis               | 3.18             | 27             | 12      |
| Cincinnati            | 2.92             | 28             | 13      |
| Detroit               | 2.25             | 29             | 14      |
| Philadelphia          | 2.12             | 30             | 15      |
| Buffalo               | 2.07             | 31             | 16      |
| Cleveland             | 2.00             | 32             | 17      |
| BOSTON                | 1.46             | 33             | 18      |
| New York              | -0.91            | 34             | 19      |
| Pittsburgh            | NA               |                |         |



Table 12G. Ranking of Metropolitan Areas on  
Average Annual Change in Services  
Employment, 1972-78

|                       | AvgAn.<br>% Chg. | Rk. to U.S. | Rk.Rel. |
|-----------------------|------------------|-------------|---------|
| San Jose              | 7.09             | 1           | 16      |
| Houston               | 6.95             | 2           | 15      |
| Phoenix               | 6.66             | 3           | 14      |
| Seattle               | 5.68             | 4           | 13      |
| Oklahoma City         | 5.23             | 5           | 12      |
| Fort Worth            | 5.23             | 6           | 11      |
| Atlanta               | 5.17             | 7           | 10      |
| El Paso               | 4.93             | 8           | 9       |
| San Francisco         | 4.82             | 9           | 8       |
| Dallas                | 4.78             | 10          | 7       |
| Milwaukee             | 4.74             | 11          | 6       |
| Kansas City           | 4.71             | 12          | 5       |
| Washington, DC        | 4.65             | 13          | 4       |
| Los Angeles           | 4.62             | 14          | 3       |
| Indianapolis          | 4.56             | 15          | 2       |
| Nashville             | 4.10             | 16          | 1       |
| UNITED STATES         | 3.81             |             |         |
| Chicago               | 3.74             | 17          | 1       |
| Columbus              | 3.62             | 18          | 2       |
| Memphis               | 3.58             | 19          | 3       |
| San Antonio           | 3.57             | 20          | 4       |
| New Orleans           | 3.55             | 21          | 5       |
| BOSTON                | 3.32             | 22          | 6       |
| Detroit               | 3.25             | 23          | 7       |
| St. Louis             | 3.18             | 24          | 8       |
| Pittsburgh            | 3.18             | 25          | 9       |
| Cincinnati            | 3.12             | 26          | 10      |
| Baltimore             | 3.12             | 27          | 11      |
| Jacksonville          | 2.84             | 28          | 12      |
| Buffalo               | 2.60             | 29          | 13      |
| Cleveland             | 2.43             | 30          | 14      |
| Philadelphia          | 2.14             | 31          | 15      |
| New York              | 0.97             | 32          | 16      |
| Minneapolis -St. Paul | NA               |             |         |
| Denver                | NA               |             |         |
| San Diego             | NA               |             |         |

Table 13A. Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, 1978-84

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rk.Rel.<br>to U.S. |
|-----------------------|------------------|----------------|--------------------|
| Phoenix               | 5.38             | 1              | 19                 |
| Dallas                | 5.37             | 2              | 18                 |
| San Jose              | 5.11             | 3              | 17                 |
| Atlanta               | 4.43             | 4              | 16                 |
| Fort Worth            | 4.27             | 5              | 15                 |
| San Antonio           | 3.99             | 6              | 14                 |
| Denver                | 3.89             | 7              | 13                 |
| Oklahoma City         | 3.56             | 8              | 12                 |
| Houston               | 3.49             | 9              | 11                 |
| San Diego             | 3.31             | 10             | 10                 |
| Jacksonville          | 2.98             | 11             | 9                  |
| BOSTON                | 2.92             | 12             | 8                  |
| Seattle               | 2.89             | 13             | 7                  |
| Washington, DC        | 2.71             | 14             | 6                  |
| Nashville             | 2.70             | 15             | 5                  |
| Minneapolis - St.Paul | 2.45             | 16             | 4                  |
| San Francisco         | 2.35             | 17             | 3                  |
| El Paso               | 2.15             | 18             | 2                  |
| Los Angeles           | 1.99             | 19             | 1                  |
| UNITED STATES         | 1.78             |                |                    |
| Colombus              | 1.46             | 20             | 1                  |
| New Orleans           | 1.38             | 21             | 2                  |
| Baltimore             | 1.31             | 22             | 3                  |
| New York              | 1.30             | 23             | 4                  |
| Philadelphia          | 1.23             | 24             | 5                  |
| Kansas City           | 1.14             | 25             | 6                  |
| St. Louis             | 1.14             | 26             | 7                  |
| Indianapolis          | 0.95             | 27             | 8                  |
| Memphis               | 0.93             | 28             | 9                  |
| Cincinnati            | 0.63             | 29             | 10                 |
| Milwaukee             | 0.31             | 30             | 11                 |
| Chicago               | 0.16             | 31             | 12                 |
| Buffalo               | -0.30            | 32             | 13                 |
| Cleveland             | -0.67            | 33             | 14                 |
| Pittsburgh            | -0.67            | 34             | 15                 |
| Detroit               | -1.11            | 35             | 16                 |

Table 13B. Ranking of Metropolitan Areas on  
Average Annual Change in Non-farm  
Employment, Manufacturing Excluded, 1978-84

|                       | AvgAn.<br>% Chg. | Rk.to U.S. | Rk.Rel. |
|-----------------------|------------------|------------|---------|
| Dallas                | 5.86             | 1          | 18      |
| Phonix                | 5.48             | 2          | 17      |
| Fort Worth            | 4.86             | 3          | 16      |
| Atlanta               | 4.76             | 4          | 15      |
| San Jose              | 4.53             | 5          | 14      |
| Denver                | 4.26             | 6          | 13      |
| Houston               | 4.25             | 7          | 12      |
| San Antonio           | 4.23             | 8          | 11      |
| Oklahoma City         | 3.74             | 9          | 10      |
| Seattle               | 3.36             | 10         | 9       |
| BOSTON                | 3.18             | 11         | 8       |
| San Diego             | 3.15             | 12         | 7       |
| Jacksonville          | 3.14             | 13         | 6       |
| Nashville             | 3.05             | 14         | 5       |
| Minneapolis -St. Paul | 2.69             | 15         | 4       |
| Washington, DC        | 2.63             | 16         | 3       |
| San Francisco         | 2.52             | 17         | 2       |
| Los Angeles           | 2.46             | 18         | 1       |
| UNITED STATES         | 2.41             |            |         |
| Columbus              | 2.14             | 19         | 1       |
| Philadelphia          | 2.05             | 20         | 2       |
| St. Louis             | 2.03             | 21         | 3       |
| New York              | 1.98             | 22         | 4       |
| El Paso               | 1.90             | 23         | 5       |
| Baltimore             | 1.90             | 24         | 6       |
| Indianapolis          | 1.86             | 25         | 7       |
| New Orleans           | 1.80             | 26         | 8       |
| Kansas City           | 1.63             | 27         | 9       |
| Cincinnati            | 1.62             | 28         | 10      |
| Milwaukee             | 1.55             | 29         | 11      |
| Memphis               | 1.53             | 30         | 12      |
| Chicago               | 1.25             | 31         | 13      |
| Buffalo               | 0.90             | 32         | 14      |
| Pittsburgh            | 0.67             | 33         | 15      |
| Cleveland             | 0.55             | 34         | 16      |
| Detroit               | 0.26             | 35         | 17      |

Table 13C. Ranking of Metropolitan Areas on  
Annual Change in Non-farm Employment  
Services Excluded, 1978-84

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|----------------|--------------|
| Dallas                | 4.75             | 1              | 16           |
| San Jose              | 4.61             | 2              | 15           |
| Phoenix               | 4.57             | 3              | 14           |
| Atlanta               | 4.11             | 4              | 13           |
| Fort Worth            | 3.96             | 5              | 12           |
| San Antonio           | 3.46             | 6              | 11           |
| Oklahoma City         | 3.41             | 7              | 10           |
| Houston               | 2.89             | 8              | 9            |
| Jacksonville          | 2.27             | 9              | 8            |
| Seattle               | 2.18             | 10             | 7            |
| BOSTON                | 2.15             | 11             | 6            |
| Nashville             | 2.07             | 12             | 5            |
| El Paso               | 1.74             | 13             | 4            |
| Washington, DC        | 1.56             | 14             | 3            |
| San Francisco         | 1.34             | 15             | 2            |
| Los Angeles           | 1.18             | 16             | 1            |
| UNITED STATES         | 1.06             |                |              |
| Columbus              | 0.71             | 17             | 1            |
| New Orleans           | 0.51             | 18             | 2            |
| New York              | 0.34             | 19             | 3            |
| Kansas City           | 0.30             | 20             | 4            |
| Baltimore             | 0.28             | 21             | 5            |
| Philadelphia          | 0.23             | 22             | 6            |
| Memphis               | 0.21             | 23             | 7            |
| St. Louis             | 0.21             | 24             | 8            |
| Indianapolis          | 0.07             | 25             | 9            |
| Cincinnati            | -0.23            | 26             | 10           |
| Milwaukee             | -0.64            | 27             | 11           |
| Chicago               | -0.98            | 28             | 12           |
| Denver                | -1.13            | 29             | 13           |
| Buffalo               | -1.42            | 30             | 14           |
| San Diego             | -1.47            | 31             | 15           |
| Cleveland             | -1.71            | 32             | 16           |
| Pittsburgh            | -1.99            | 33             | 17           |
| Detroit               | -2.27            | 34             | 18           |
| Minneapolis -St. Paul | -2.55            | 35             | 19           |



Table 13D. Ranking of Metropolitan Areas on  
Average Annual Change in Manufacturing  
Employment, 1978-84

|                       | AvgAn. | Rk.Rel.    |
|-----------------------|--------|------------|
|                       | % Chg. | Rk.to U.S. |
| San Jose              | 6.40   | 1 18       |
| Washington, DC        | 4.95   | 2 17       |
| Phoenix               | 4.82   | 3 16       |
| San Diego             | 4.60   | 4 15       |
| El Paso               | 3.45   | 5 14       |
| Dallas                | 2.98   | 6 13       |
| Atlanta               | 2.32   | 7 12       |
| Oklahoma City         | 2.08   | 8 11       |
| Fort Worth            | 2.01   | 9 10       |
| BOSTON                | 1.85   | 10 9       |
| San Antonio           | 1.77   | 11 8       |
| Minneapolis -St. Paul | 1.49   | 12 7       |
| Jacksonville          | 1.44   | 13 6       |
| Nashville             | 1.20   | 14 5       |
| Denver                | 0.99   | 15 4       |
| Seattle               | 0.66   | 16 3       |
| San Francisco         | 0.54   | 17 2       |
| Los Angeles           | 0.28   | 18 1       |
| UNITED STATES         | -0.91  |            |
| Kansas City           | -1.36  | 19 1       |
| Columbus              | -1.74  | 20 2       |
| Houston               | -1.76  | 21 3       |
| Philadelphia          | -2.13  | 22 4       |
| St. Louis             | -2.30  | 23 5       |
| Baltimore             | -2.30  | 24 6       |
| Memphis               | -2.56  | 25 7       |
| Cincinnati            | -2.58  | 26 8       |
| Indianapolis          | -2.64  | 27 9       |
| New York              | -2.93  | 28 10      |
| New Orleans           | -2.93  | 29 11      |
| Milwaukee             | -3.16  | 30 12      |
| Chicago               | -3.71  | 31 13      |
| Cleveland             | -4.24  | 32 14      |
| Detroit               | -4.66  | 33 15      |
| Buffalo               | -4.82  | 34 16      |
| Pittsburgh            | -6.33  | 35 17      |

Table 13E. Ranking of Metropolitan Areas on  
Average Annual Change in Retail Trade  
Employment, 1978-84

|                       | AvgAn.<br>% Chg. | Rk.<br>to U.S. | Rel.<br>U.S. |
|-----------------------|------------------|----------------|--------------|
| Dallas                | 5.54             | 1              | 19           |
| Fort Worth            | 5.38             | 2              | 18           |
| Phoenix               | 4.99             | 3              | 17           |
| Atlanta               | 4.87             | 4              | 16           |
| San Antonio           | 4.78             | 5              | 15           |
| Houston               | 4.48             | 6              | 14           |
| Nashville             | 3.91             | 7              | 13           |
| San Diego             | 3.64             | 8              | 12           |
| Denver                | 3.64             | 9              | 11           |
| Jacksonville          | 3.63             | 10             | 10           |
| Seattle               | 3.40             | 11             | 9            |
| Oklahoma City         | 3.26             | 12             | 8            |
| San Jose              | 3.05             | 13             | 7            |
| San Francisco         | 2.87             | 14             | 6            |
| Washington, DC        | 2.77             | 15             | 5            |
| BOSTON                | 2.73             | 16             | 4            |
| New Orleans           | 2.67             | 17             | 3            |
| Minneapolis -St. Paul | 2.28             | 18             | 2            |
| Baltimore             | 2.23             | 19             | 1            |
| UNITED STATES         | 2.17             |                |              |
| Cincinnati            | 1.84             | 20             | 1            |
| Los Angeles           | 1.73             | 21             | 2            |
| Columbus              | 1.68             | 22             | 3            |
| St. Louis             | 1.53             | 23             | 4            |
| El Paso               | 1.42             | 24             | 5            |
| Indianapolis          | 1.26             | 25             | 6            |
| Philadelphia          | 1.23             | 26             | 7            |
| New York              | 0.94             | 27             | 8            |
| Kansas City           | 0.77             | 28             | 9            |
| Memphis               | 0.50             | 29             | 10           |
| Pittsburgh            | 0.47             | 30             | 11           |
| Chicago               | 0.22             | 31             | 12           |
| Milwaukee             | 0.09             | 32             | 13           |
| Buffalo               | 0.04             | 33             | 14           |
| Detroit               | -0.03            | 34             | 15           |
| Cleveland             | -0.40            | 35             | 16           |

Table 13F. Ranking of Metropolitan Areas on  
Average Annual Change in F.I.R.E.  
Employment, 1978-84

|                      | AvgAn.<br>% Chg. | Rk.<br>Rk.to U.S. | Rel.<br>U.S. |
|----------------------|------------------|-------------------|--------------|
| Denver               | 7.74             | 1                 | 15           |
| Dallas               | 7.46             | 2                 | 14           |
| Houston              | 6.82             | 3                 | 13           |
| Phoenix              | 6.63             | 4                 | 12           |
| San Antonio          | 6.26             | 5                 | 11           |
| Fort Worth           | 6.07             | 6                 | 10           |
| San Diego            | 4.99             | 7                 | 9            |
| San Jose             | 4.91             | 8                 | 8            |
| El Paso              | 4.67             | 9                 | 7            |
| Atlanta              | 4.64             | 10                | 6            |
| Oklahoma City        | 4.53             | 11                | 5            |
| Minneapolis -St.Paul | 4.51             | 12                | 4            |
| Columbus             | 4.34             | 13                | 3            |
| Seattle              | 3.85             | 14                | 2            |
| Memphis              | 3.65             | 15                | 1            |
| UNITED STATES        | 3.60             |                   |              |
| BOSTON               | 3.54             | 16                | 1            |
| San Francisco        | 3.19             | 17                | 2            |
| Washington, DC       | 3.19             | 18                | 3            |
| Nashville            | 3.16             | 19                | 4            |
| New York             | 3.10             | 20                | 5            |
| Los Angeles          | 3.07             | 21                | 6            |
| Baltimore            | 2.82             | 22                | 7            |
| Milwaukee            | 2.78             | 23                | 8            |
| Kansas City          | 2.38             | 24                | 9            |
| St. Louis            | 2.32             | 25                | 10           |
| Indianapolis         | 2.19             | 26                | 11           |
| Buffalo              | 2.19             | 27                | 12           |
| New Orleans          | 2.18             | 28                | 13           |
| Philadelphia         | 2.17             | 29                | 14           |
| Jacksonville         | 2.04             | 30                | 15           |
| Chicago              | 1.93             | 31                | 16           |
| Cincinnati           | 1.64             | 32                | 17           |
| Cleveland            | 1.03             | 33                | 18           |
| Detroit              | 0.05             | 34                | 19           |
| Pittsburgh           | NA               |                   |              |

Table 13G. Ranking of Metropolitan Areas on  
Average Annual Change in Services  
Employment, 1978-84

|                       | AvgAn.<br>% Chg. | Rk. | Rk.Rel.<br>to U.S. |
|-----------------------|------------------|-----|--------------------|
| Phoenix               | 8.04             | 1   | 16                 |
| Dallas                | 7.55             | 2   | 15                 |
| San Jose              | 6.57             | 3   | 14                 |
| San Antonio           | 5.95             | 4   | 13                 |
| Washington, DC        | 5.63             | 5   | 12                 |
| Jacksonville          | 5.63             | 6   | 11                 |
| Atlanta               | 5.53             | 7   | 10                 |
| Houston               | 5.44             | 8   | 9                  |
| Fort Worth            | 5.40             | 9   | 8                  |
| Seattle               | 5.25             | 10  | 7                  |
| BOSTON                | 4.80             | 11  | 6                  |
| Baltimore             | 4.74             | 12  | 5                  |
| San Francisco         | 4.74             | 13  | 4                  |
| Nashville             | 4.72             | 14  | 3                  |
| Indianapolis          | 4.22             | 15  | 2                  |
| Los Angeles           | 4.20             | 16  | 1                  |
| UNITED STATES         | 4.19             |     |                    |
| Oklahoma City         | 4.14             | 17  | 1                  |
| Philadelphia          | 4.07             | 18  | 2                  |
| El Paso               | 4.01             | 19  | 3                  |
| Columbus              | 4.01             | 20  | 4                  |
| Kansas City           | 4.01             | 21  | 5                  |
| New Orleans           | 3.96             | 22  | 6                  |
| St. Louis             | 3.89             | 23  | 7                  |
| Chicago               | 3.75             | 24  | 8                  |
| New York              | 3.54             | 25  | 9                  |
| Cincinnati            | 3.46             | 26  | 10                 |
| Milwaukee             | 3.29             | 27  | 11                 |
| Memphis               | 3.29             | 28  | 12                 |
| Buffalo               | 3.27             | 29  | 13                 |
| Pittsburgh            | 3.03             | 30  | 14                 |
| Detroit               | 2.81             | 31  | 15                 |
| Cleveland             | 2.76             | 32  | 16                 |
| San Diego             | NA               |     |                    |
| Minneapolis -St. Paul | NA               |     |                    |
| Denver                | NA               |     |                    |



# DISTRIBUTION OF METRO AREAS 1969-84

AVANN. % CHANGE IN NON-FARM EMPLOYMENT

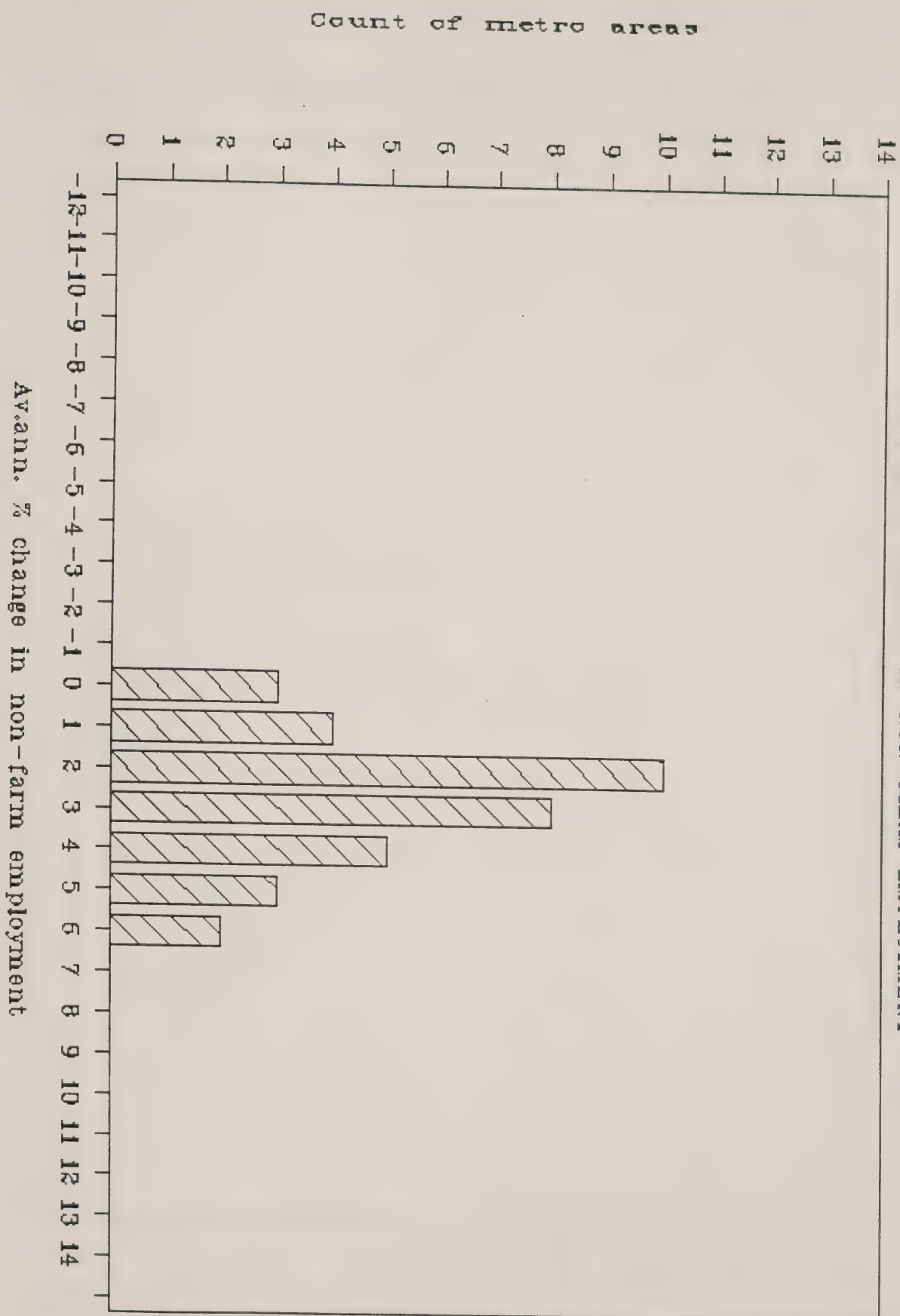
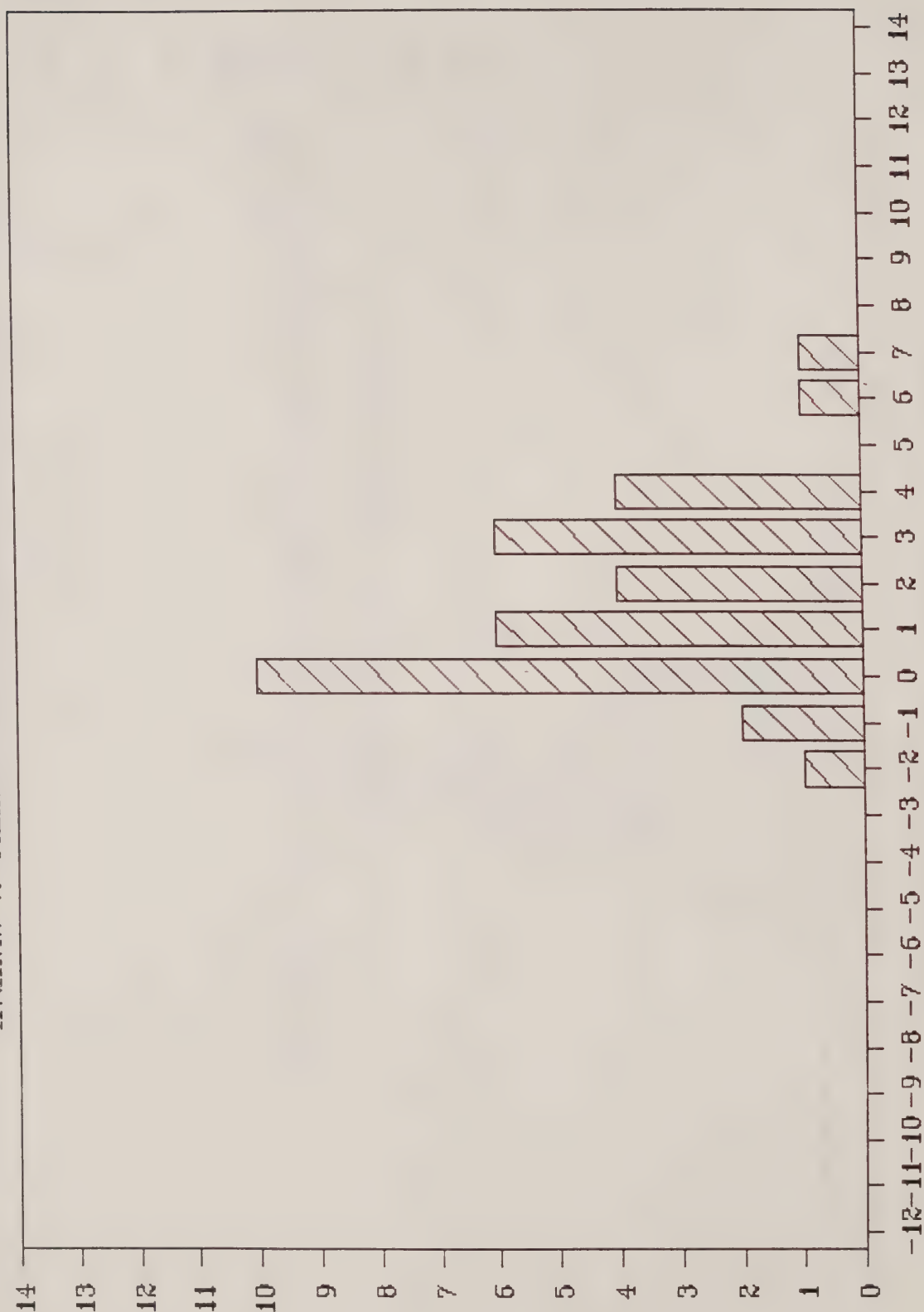


Figure 1B.

# DISTRIBUTION OF METRO AREAS 1969-72

AV. ANN. % CHANGE IN NON-FARM EMPLOYMENT



AV. ANN. % change in non-farm employment

Figure 1c.

# DISTRIBUTION OF METRO AREAS 1972-78

AV. Ann. % Change in Non-farm Employment

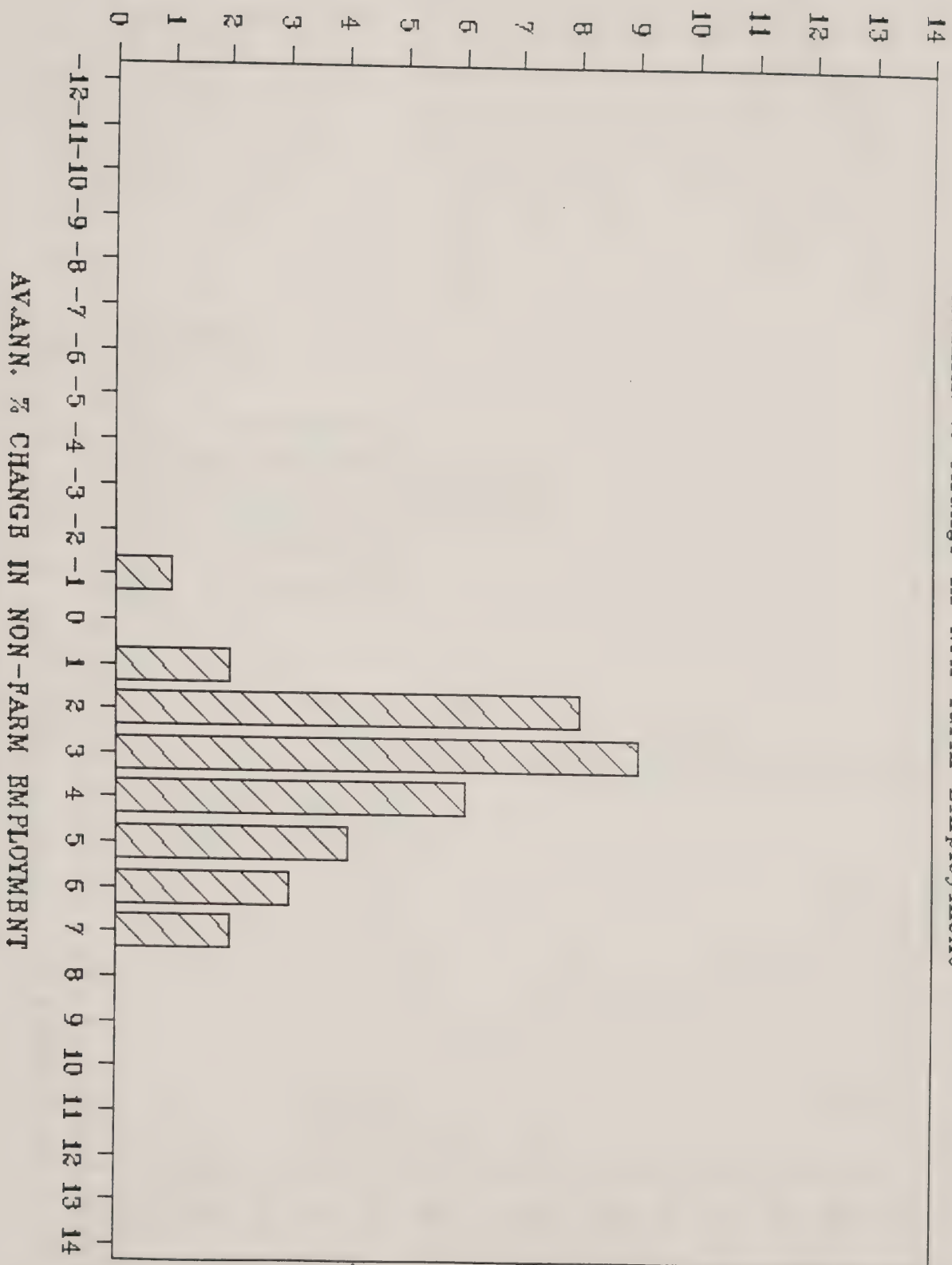


Figure 1D.

# DISTRIBUTION OF METRO AREAS 1978-84

AV. ANN. % CHANGE IN NON-FARM EMPLOYMENT

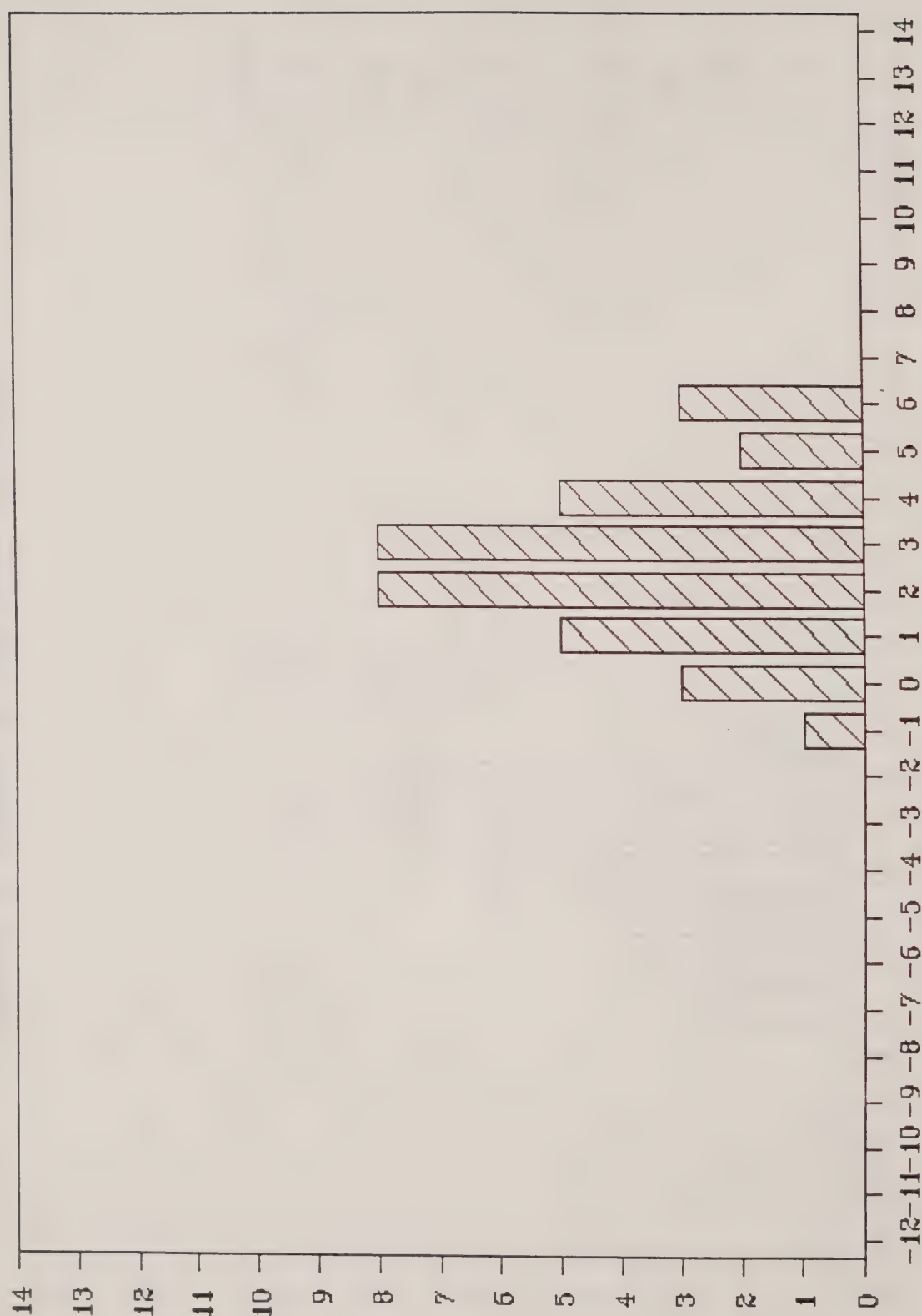




Figure 2A.

# DISTRIBUTION OF METRO AREAS 1969-84

AVAnn. % Chg. in Non-F. Empl.Mfg.Bxcl.

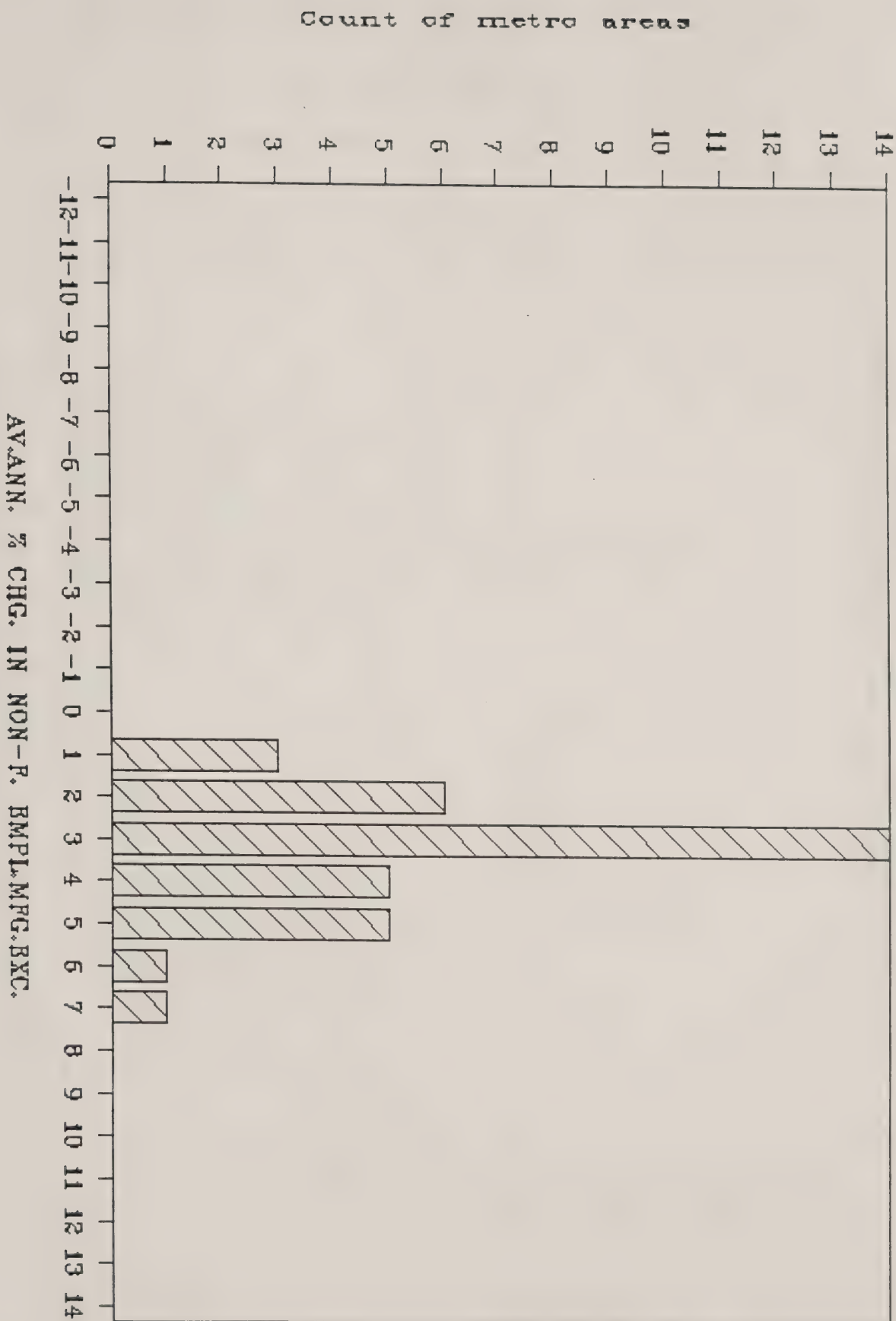
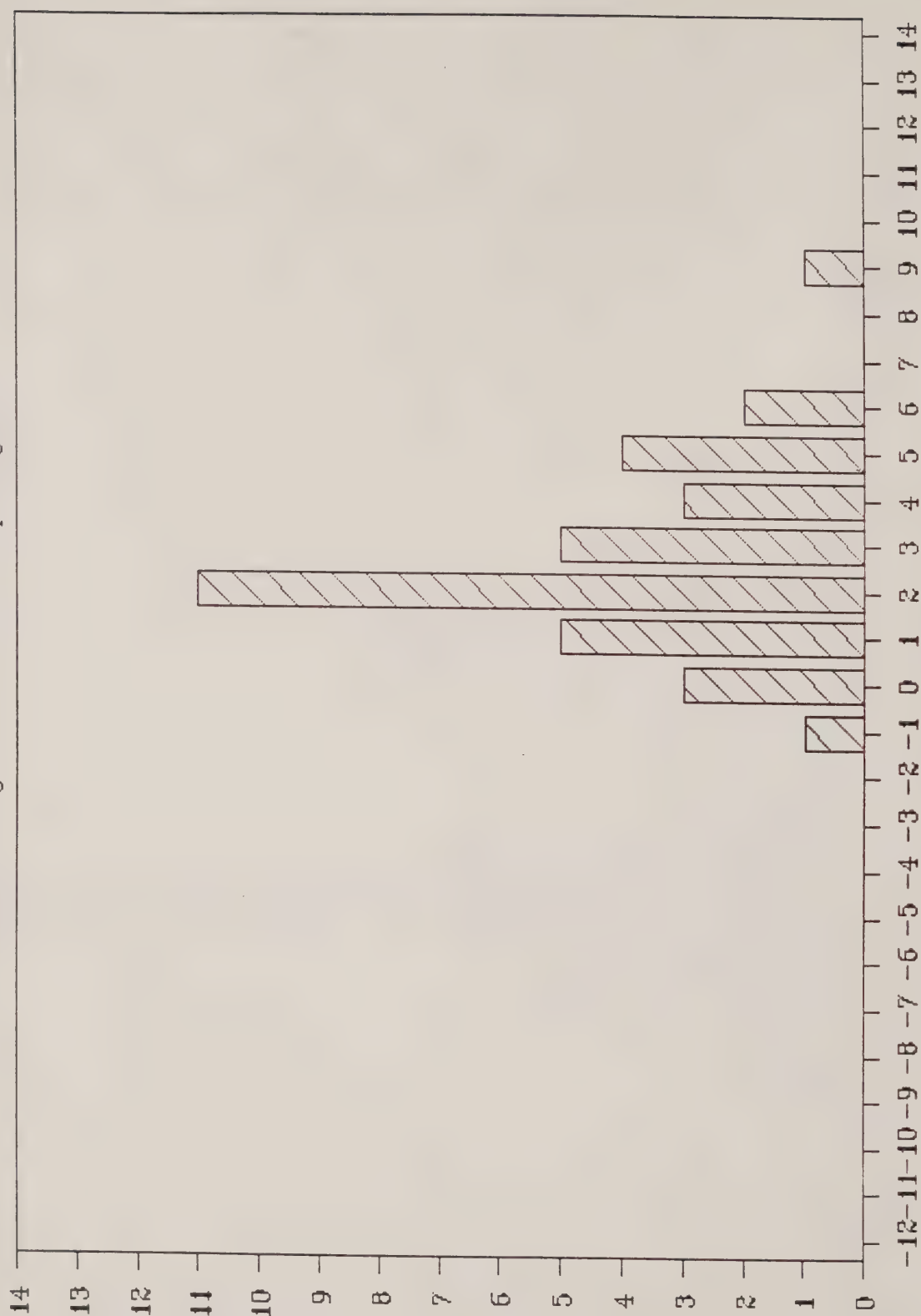


Figure 2B.

# DISTRIBUTION OF METRO AREAS 1969-72

AV. ANN. % CHG. in Non-F. Empl. Mfg. Excl.



AV. ANN. % CHG. IN NON-F. EMPL. MFG. EXC.

Figure 2C.

# DISTRIBUTION OF METRO AREAS 1972-78

Av. Ann. % Chg. in Non-f. Empl. Mfg. Excl.

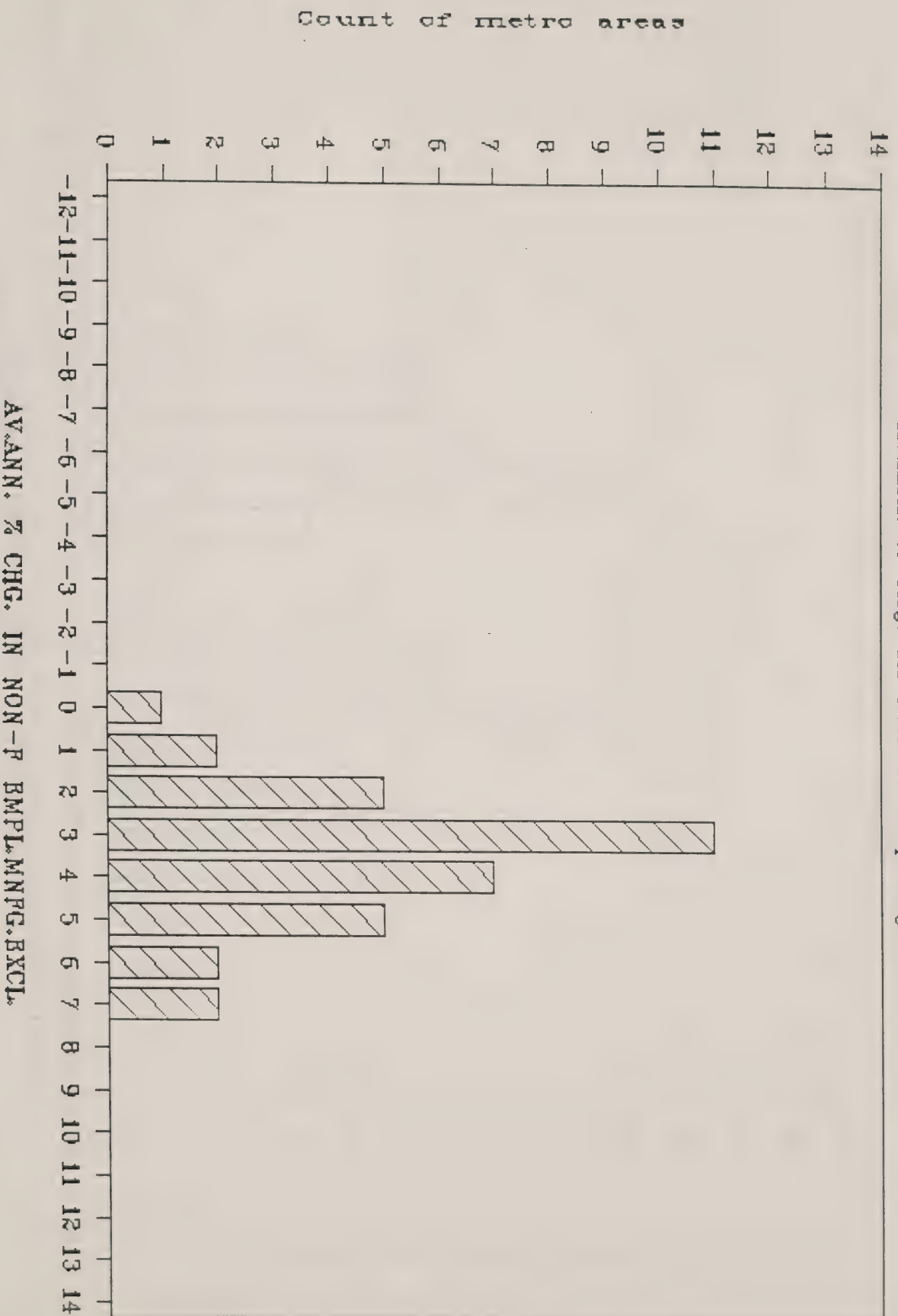
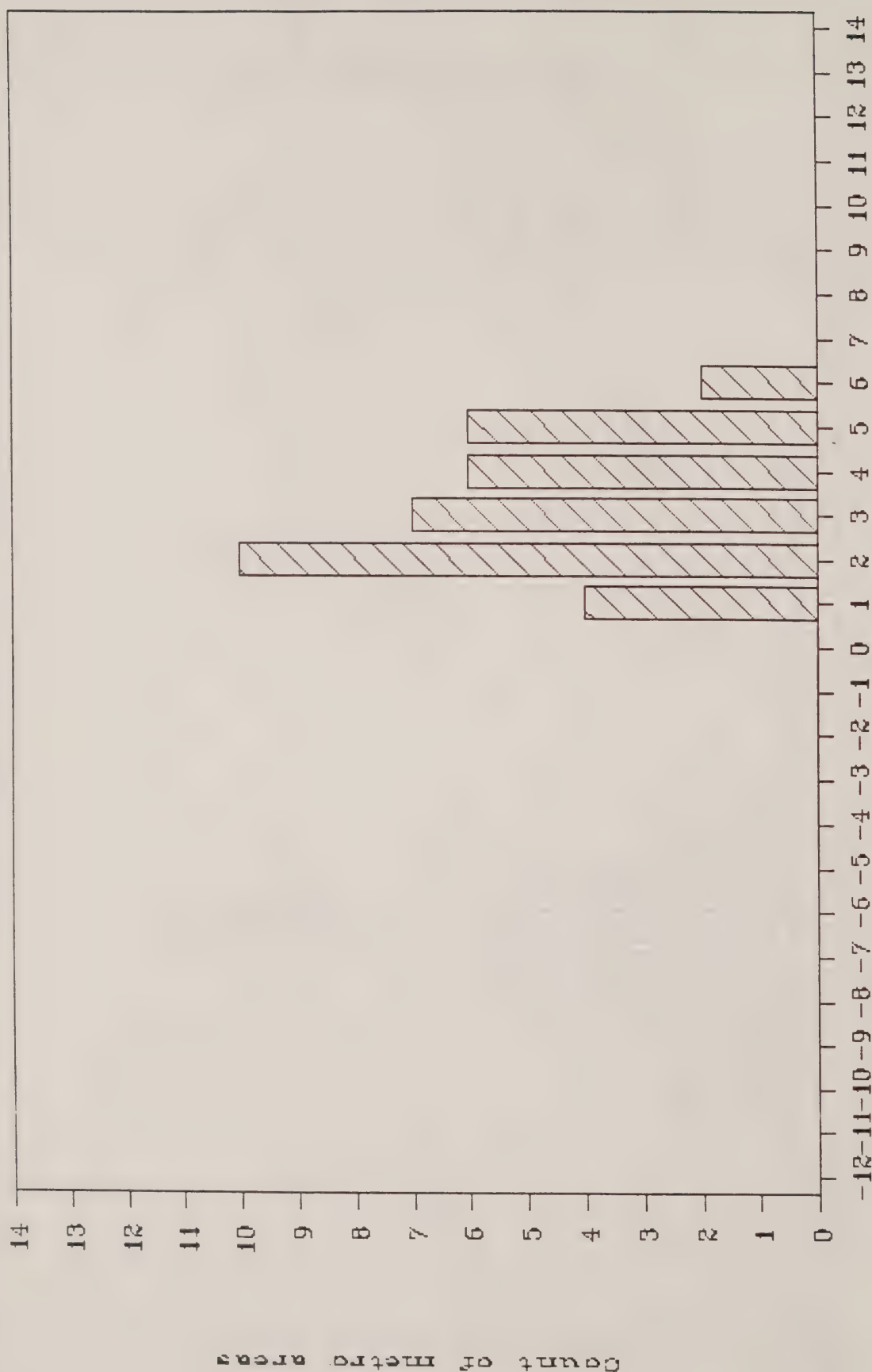


Figure 2D.

# DISTRIBUTION OF METRO AREAS 1978-84

AV. ANN. % CHG. in Non-F. Empl. Mfg. Excl.



AV. ANN. % CHG. IN NON-F. EMPL. MFG. EXCL.



Figure 3A.

# DISTRIBUTION OF METRO AREAS 1969-84

Av. Ann. % Chg. in Non-F. Empl. Ser. Excl.

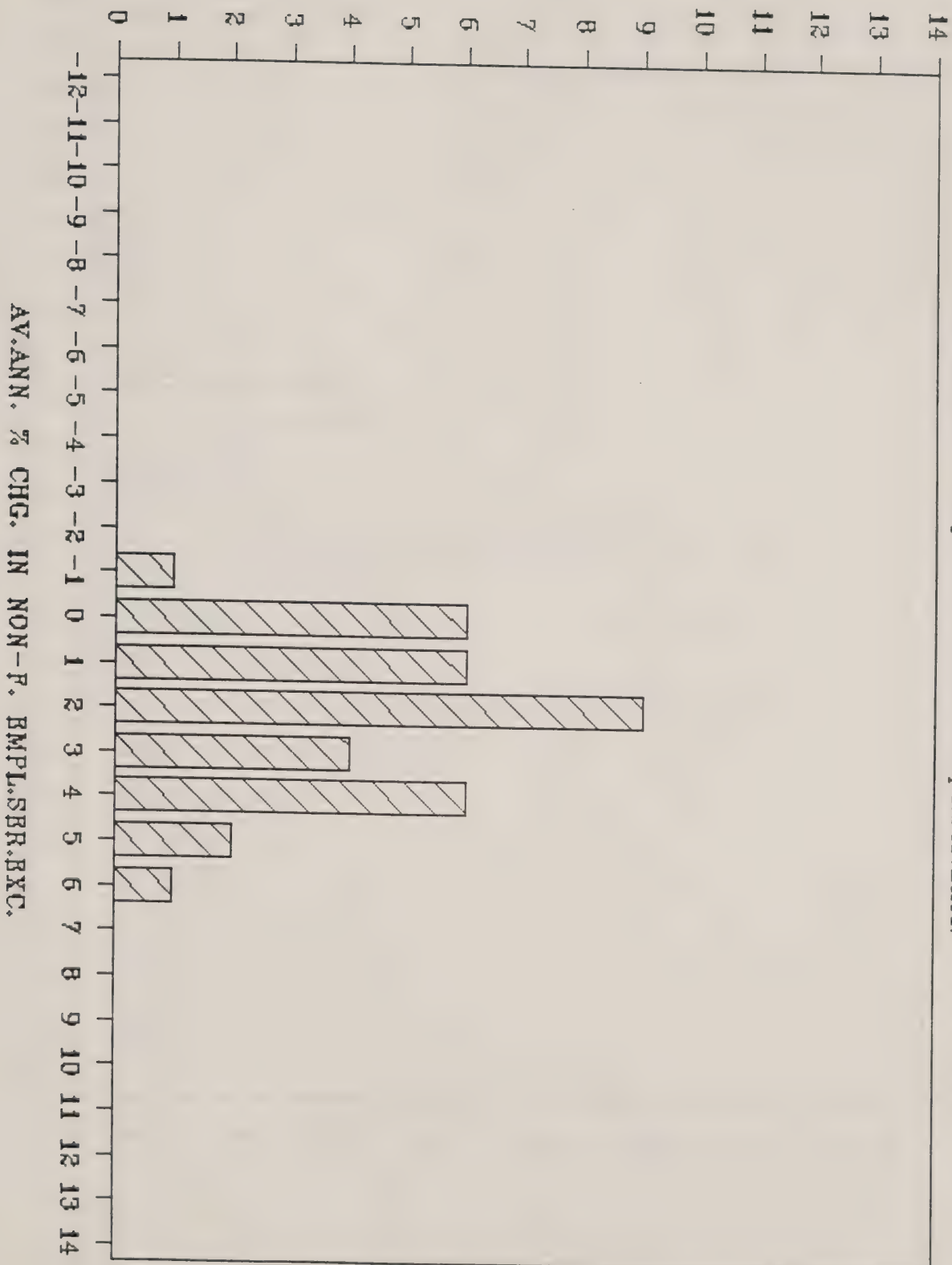
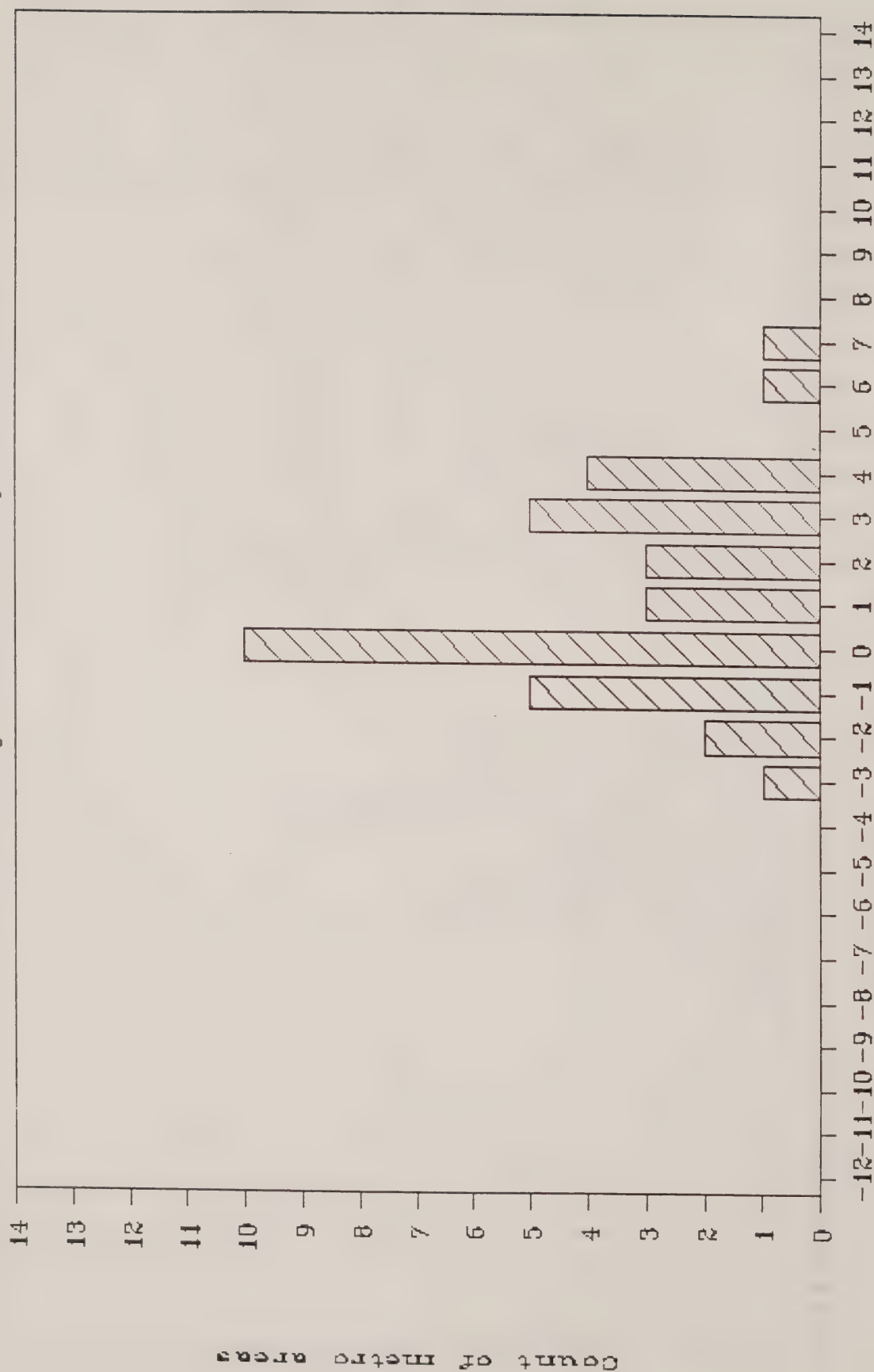


Figure 3B.

# DISTRIBUTION OF METRO AREAS 1969-72

AV. ANN. % CHG. in Non-F. Empl. Ser. Excl.

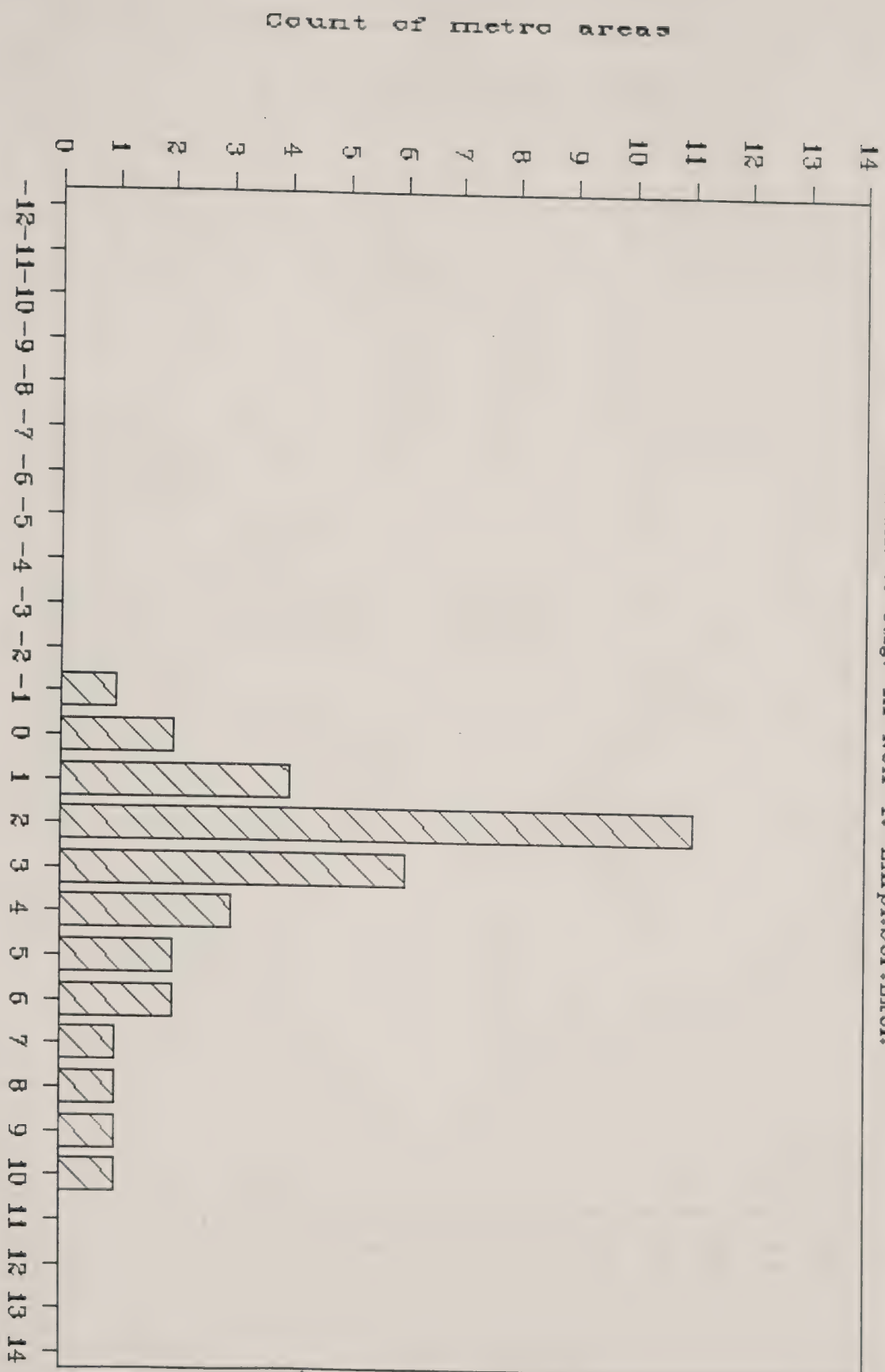


AV. ANN. % CHG. IN NON-F. EMPL. SER. EXC.

Figure 3C.

# DISTRIBUTION OF METRO AREAS 1972-78

AV. Ann. % Chg. in Non-f. Empl. Ser. Excl.



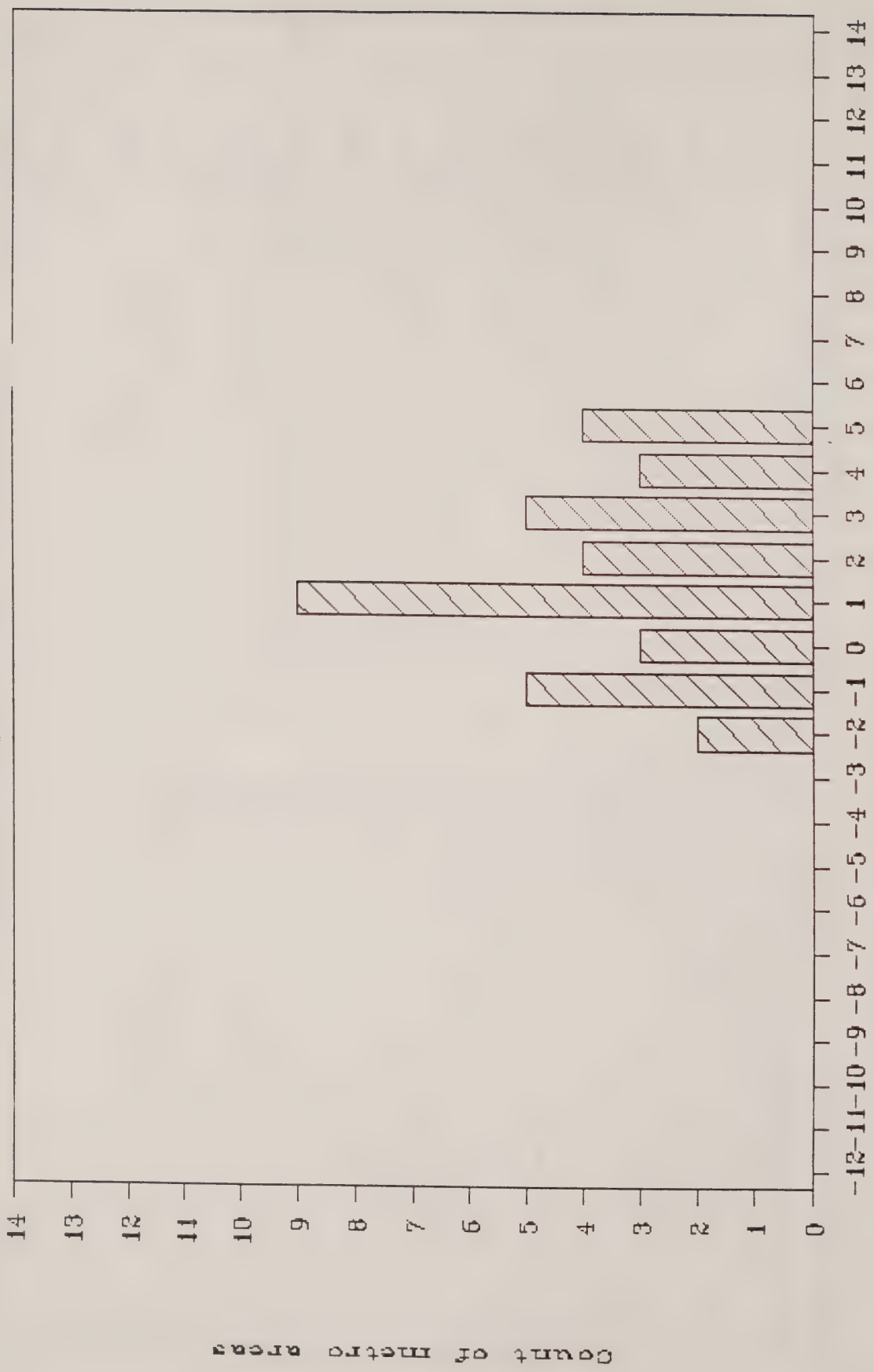
AV. Ann. % Chg. in Non-f. Empl. Ser. Excl.

Figure 3D.

# DISTRIBUTION OF METRO ARF

78-84

AV. ANN. % CHG. IN NON-P. EMPL. SER. 1



AV. ANN. % CHG. IN NON-P. EMPL. SER. BXC.



Figure 4A.

# DISTRIBUTION OF METRO AREAS 1969-84

AV. ANN. % CHANGE IN MANUFACTURING BMPL.

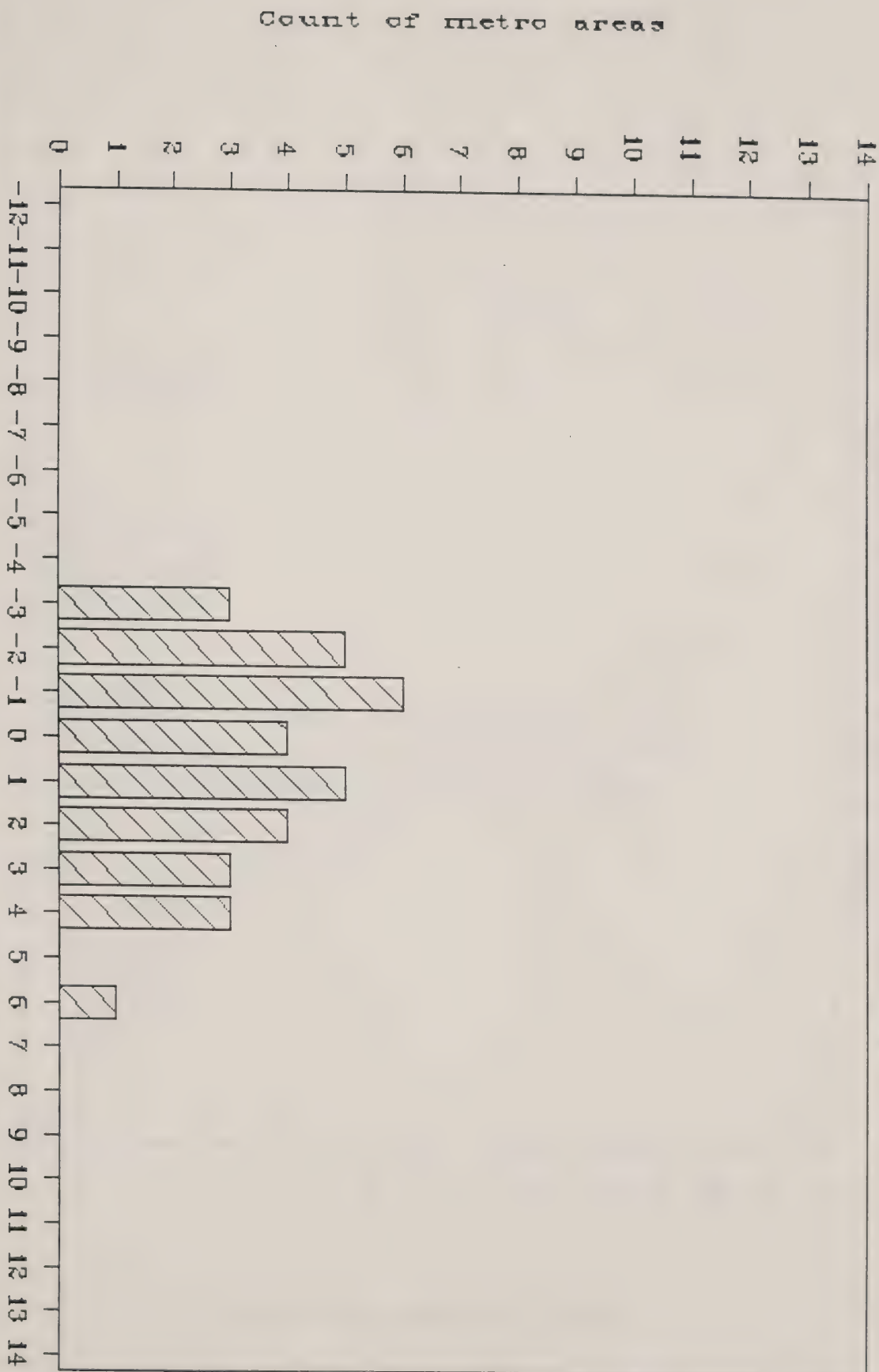
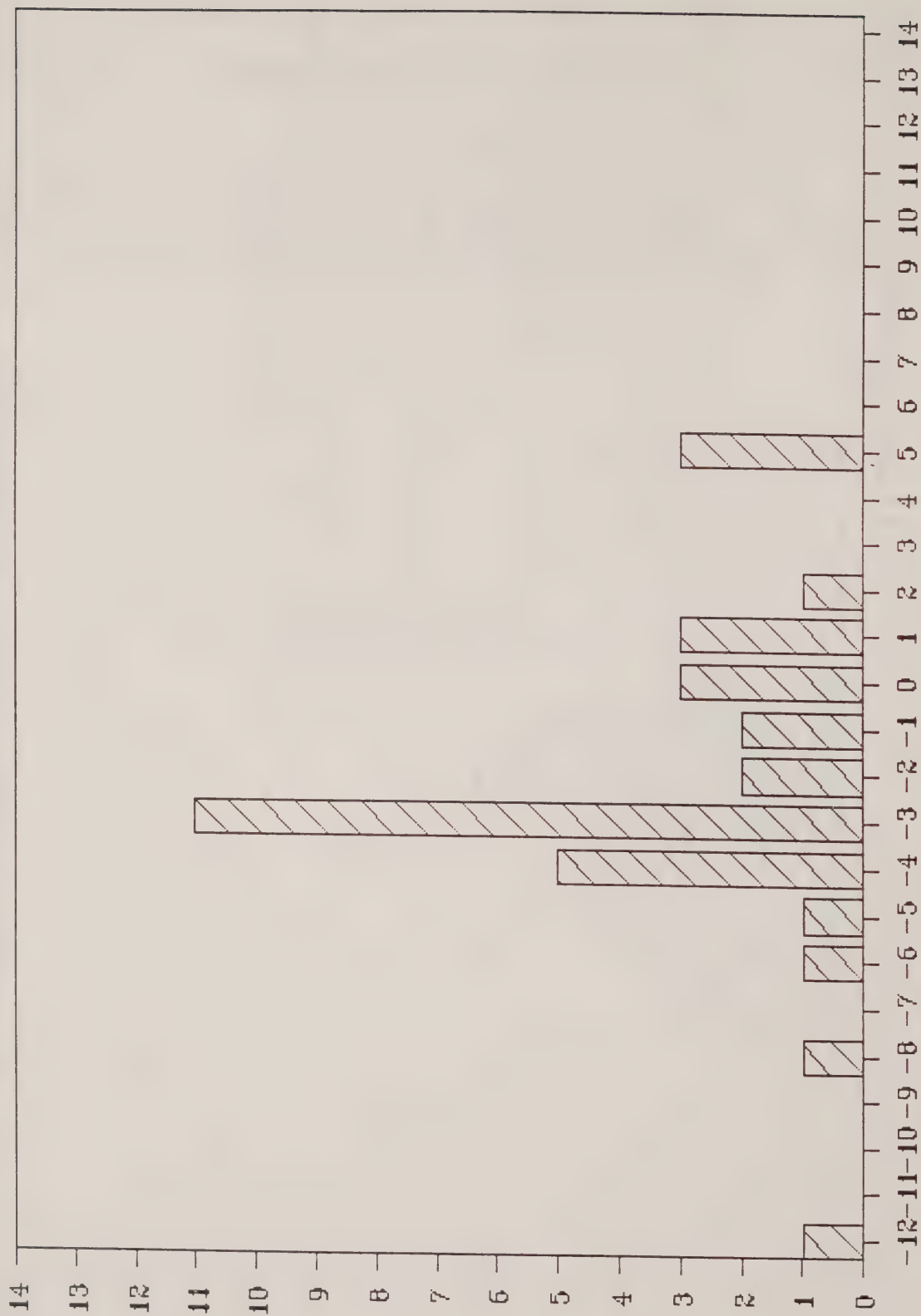


Figure 4B.

# DISTRIBUTION OF METRO AREAS 1969-72

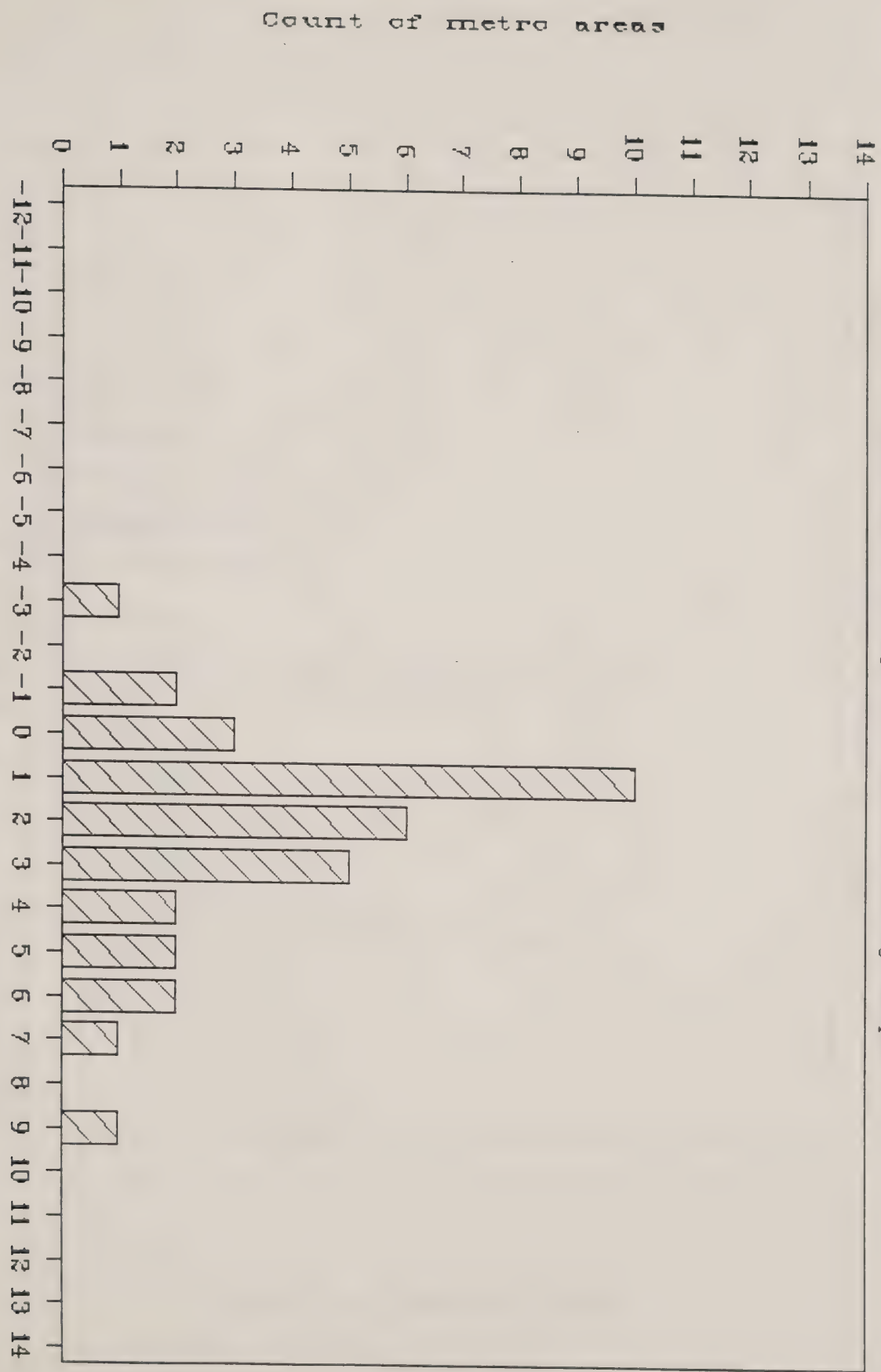
AV. ANN. % CHANGE IN MANUFACTURING BMPL.



AV. ANN. % CHANGE IN MANUFACTURING BMPL.

# DISTRIBUTION OF METRO AREAS 1972-78

Av. Ann. % Change in manufacturing Empl.

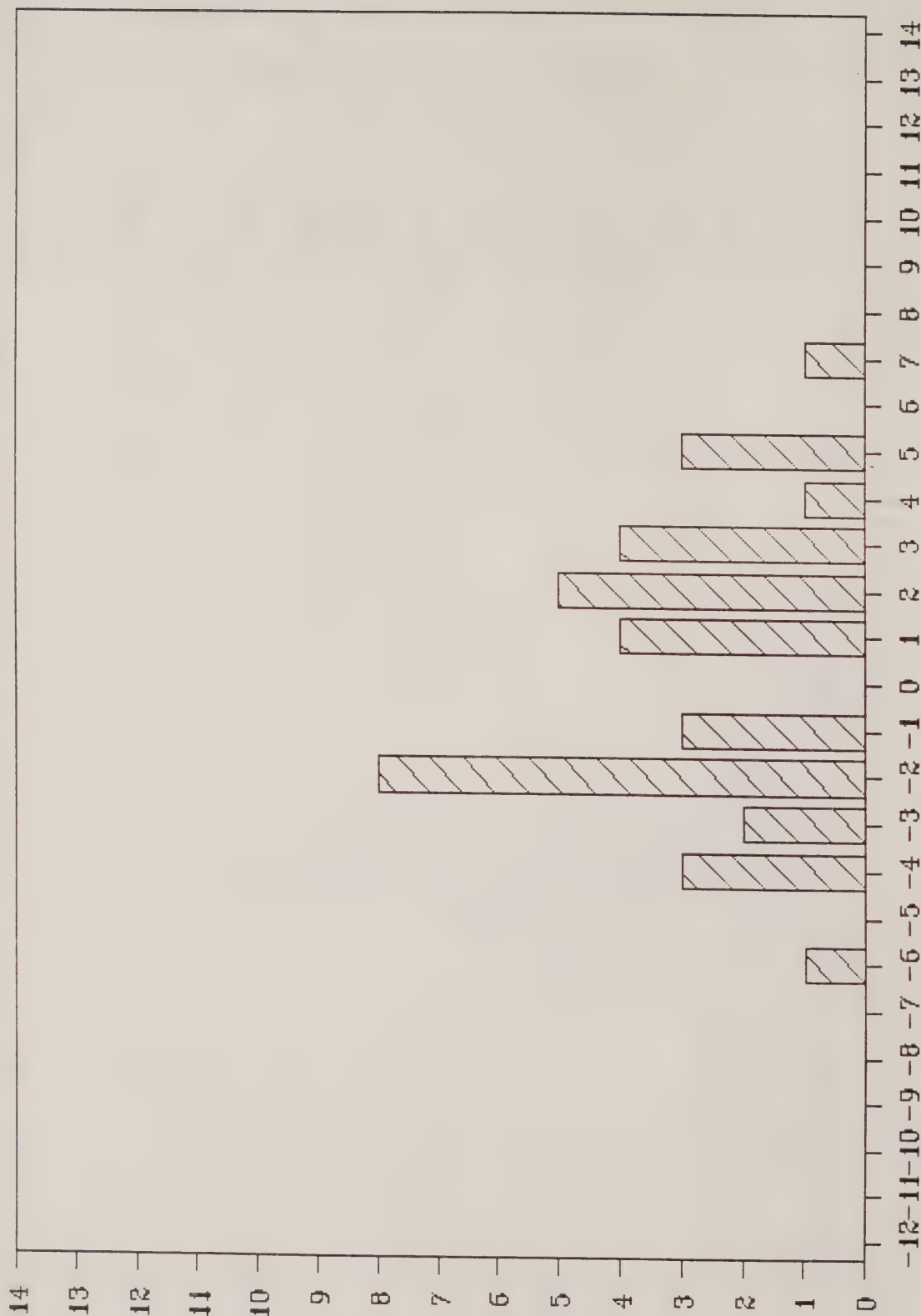


AV. ANN. % CHANGE IN MANUFACTURING EMPL.

Figure 4D.

# DISTRIBUTION OF METRO AREAS 1978-84

AV. ANN. % CHANGE IN MANUFACTURING BMPL.



AV. ANN. % CHANGE IN MANUFACTURING BMPL.



Figure 5A.

# DISTRIBUTION OF METRO AREAS 1969-84

AV. ANN. % Change in Retail Trade Empl.

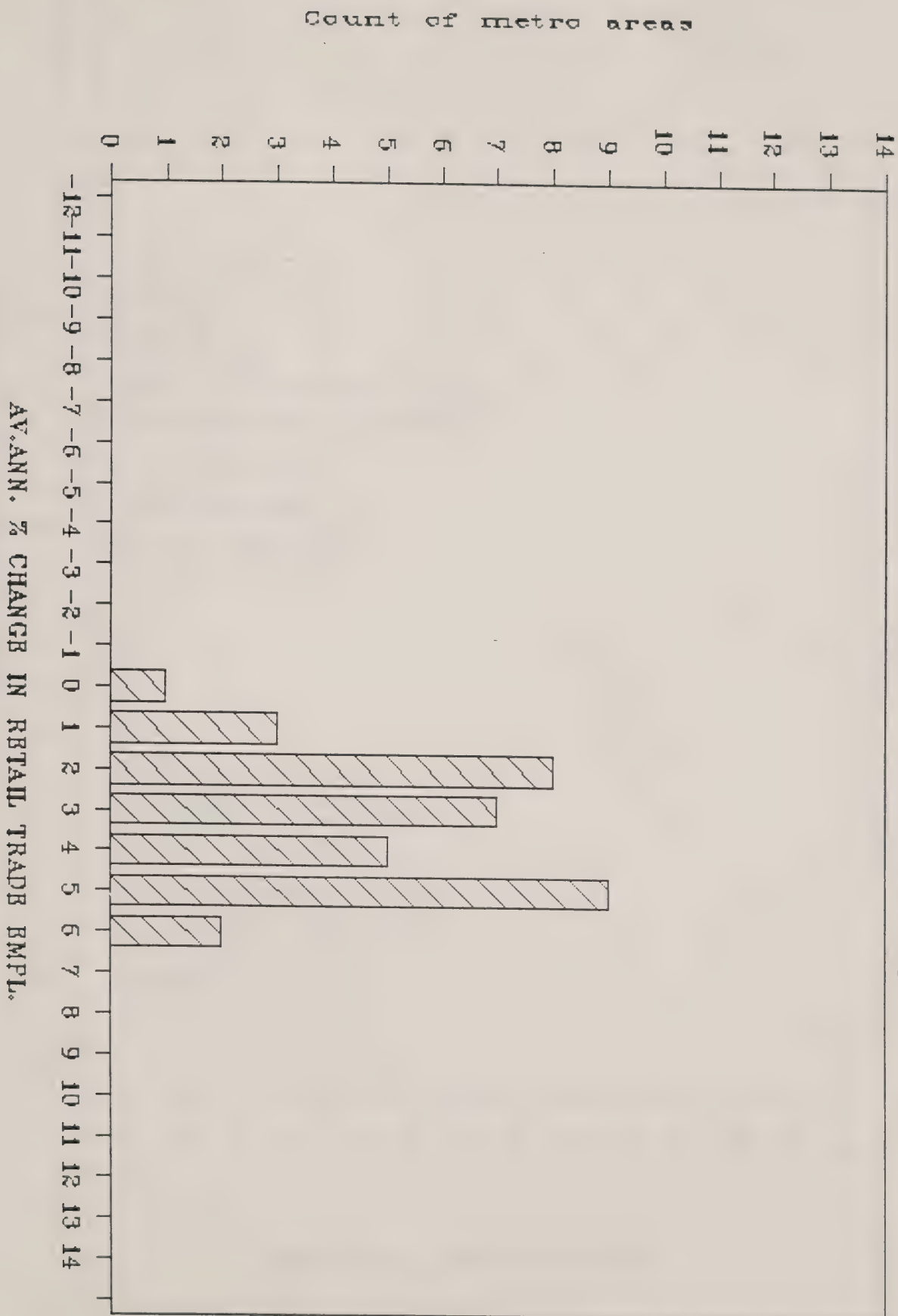
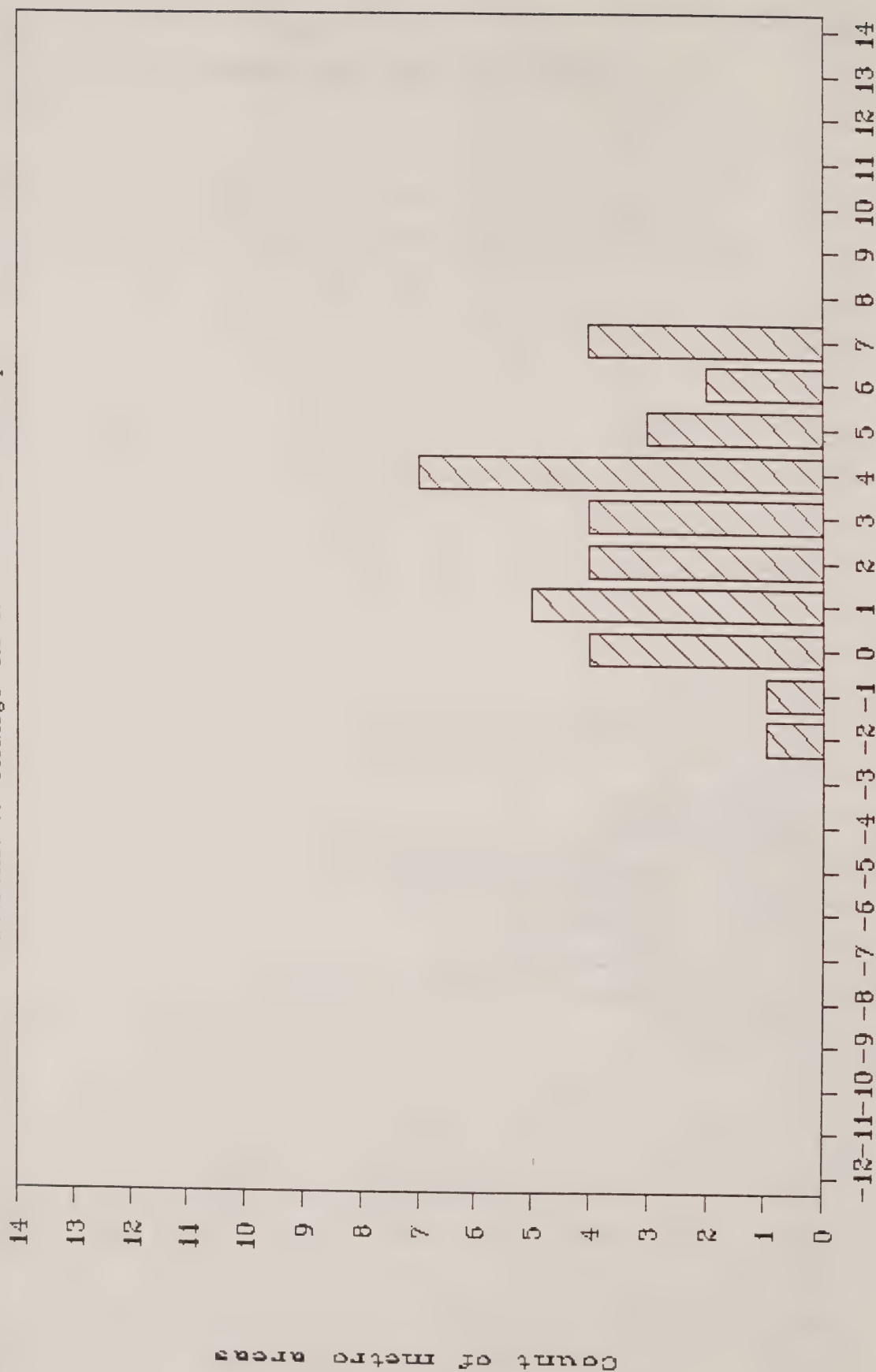


Figure 5B.

# DISTRIBUTION OF METRO AREAS 1969-72

Av. Ann. % Change in Retail Trade Empl.



AV. ANN. % CHANGE IN RETAIL TRADE EMPL.

Figure 5C.

# DISTRIBUTION OF METRO AREAS 1972-78

AV. ANN. % Change in Retail Trade Empl.

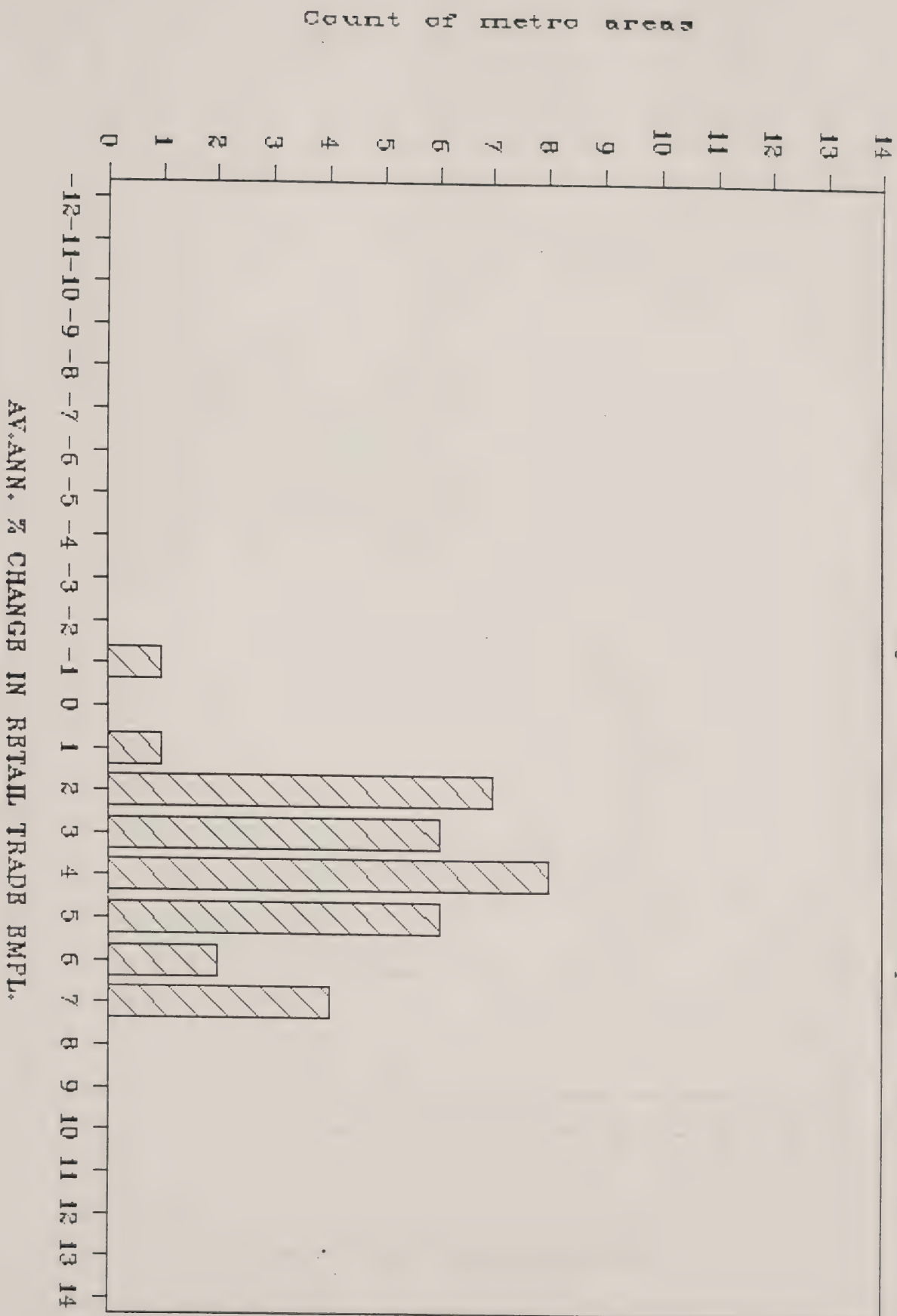
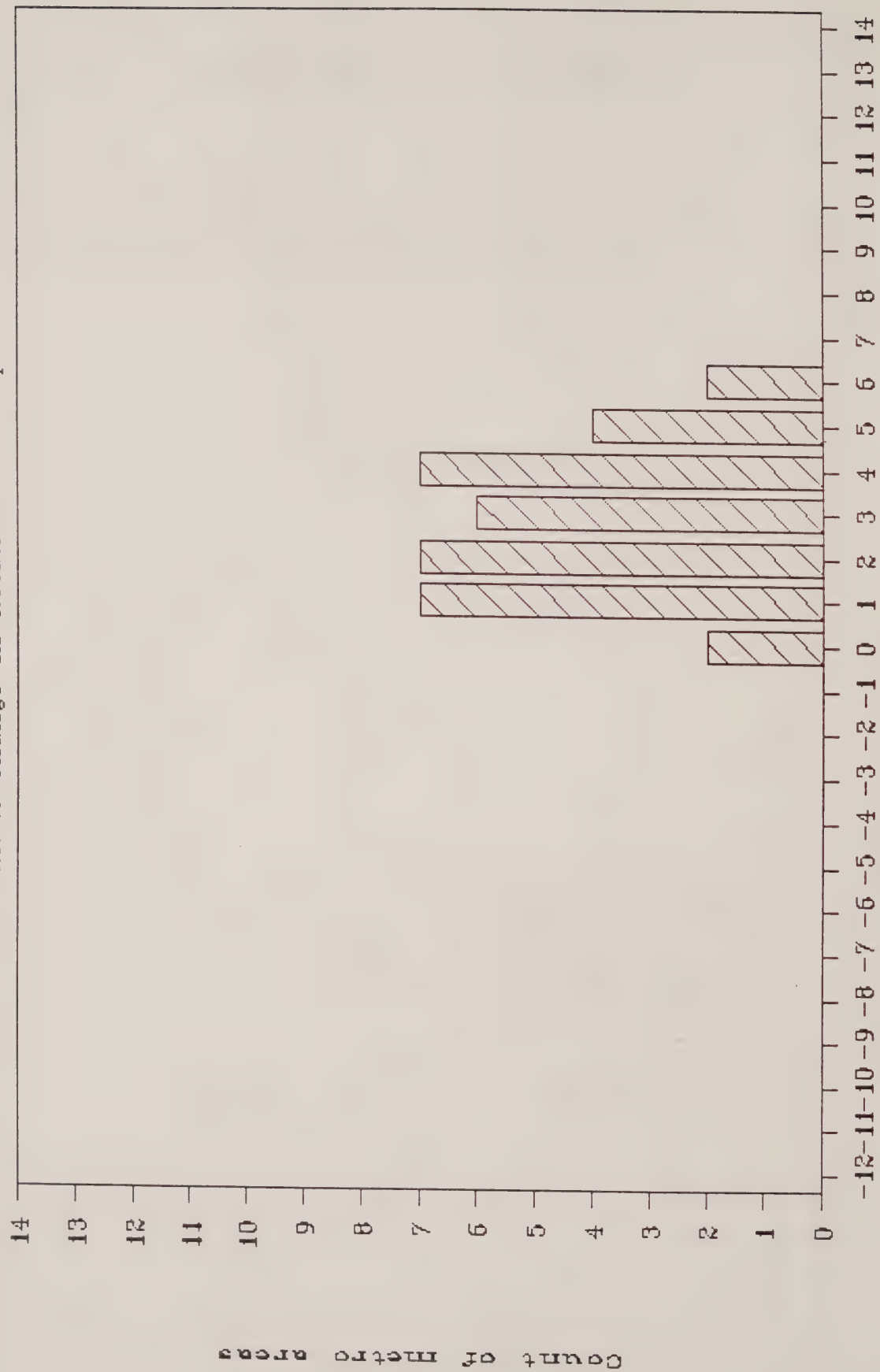


Figure 5D.

# DISTRIBUTION OF METRO AREAS 1978-84

AV. ANN. % Change in Retail Trade Empl.



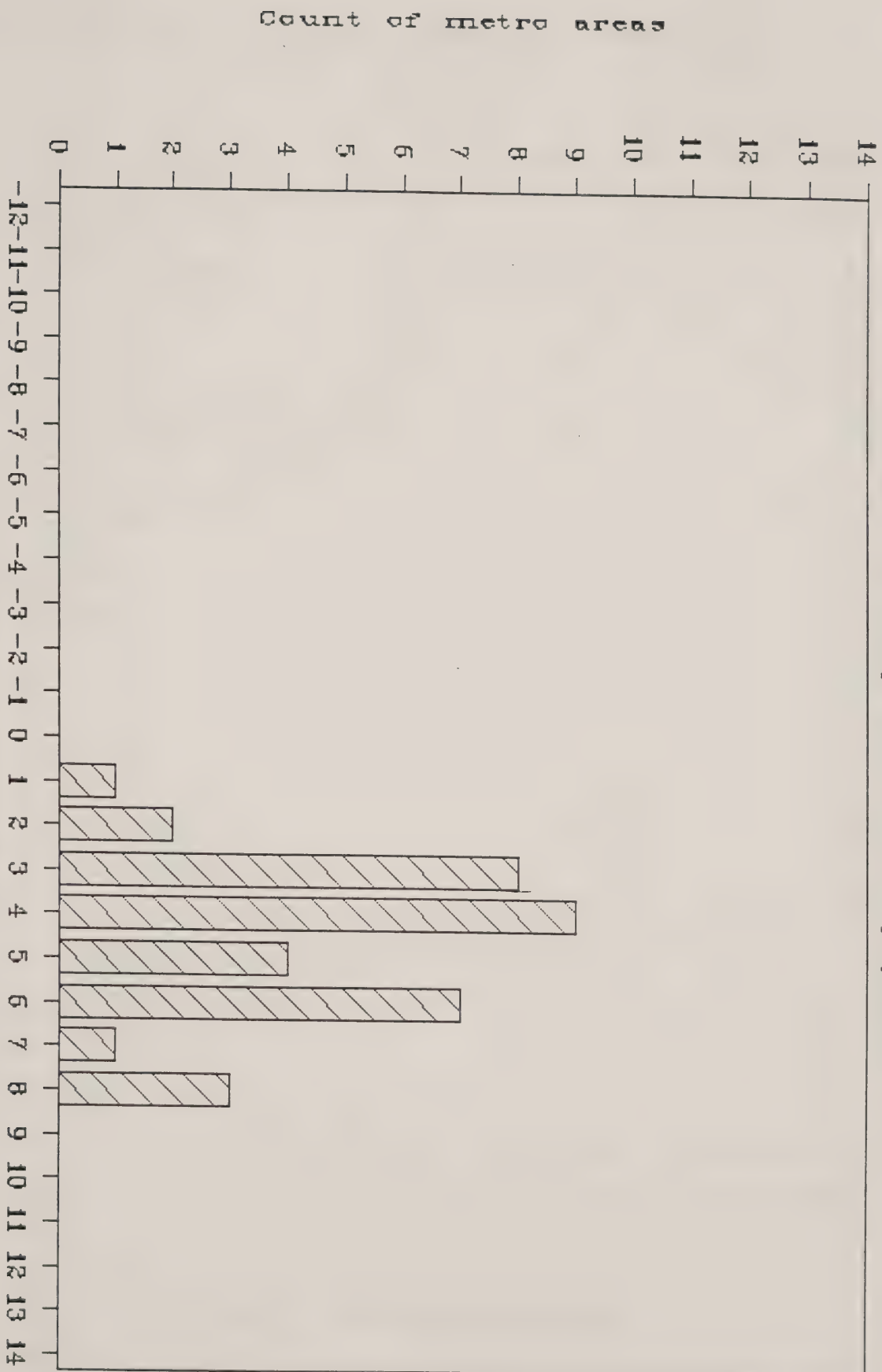
AV. ANN. % CHANGE IN RETAIL TRADE EMPL.



Figure 6A.

# DISTRIBUTION OF METRO AREAS 1969-84

Av. Ann. % Change in F.I.R.B. Employment

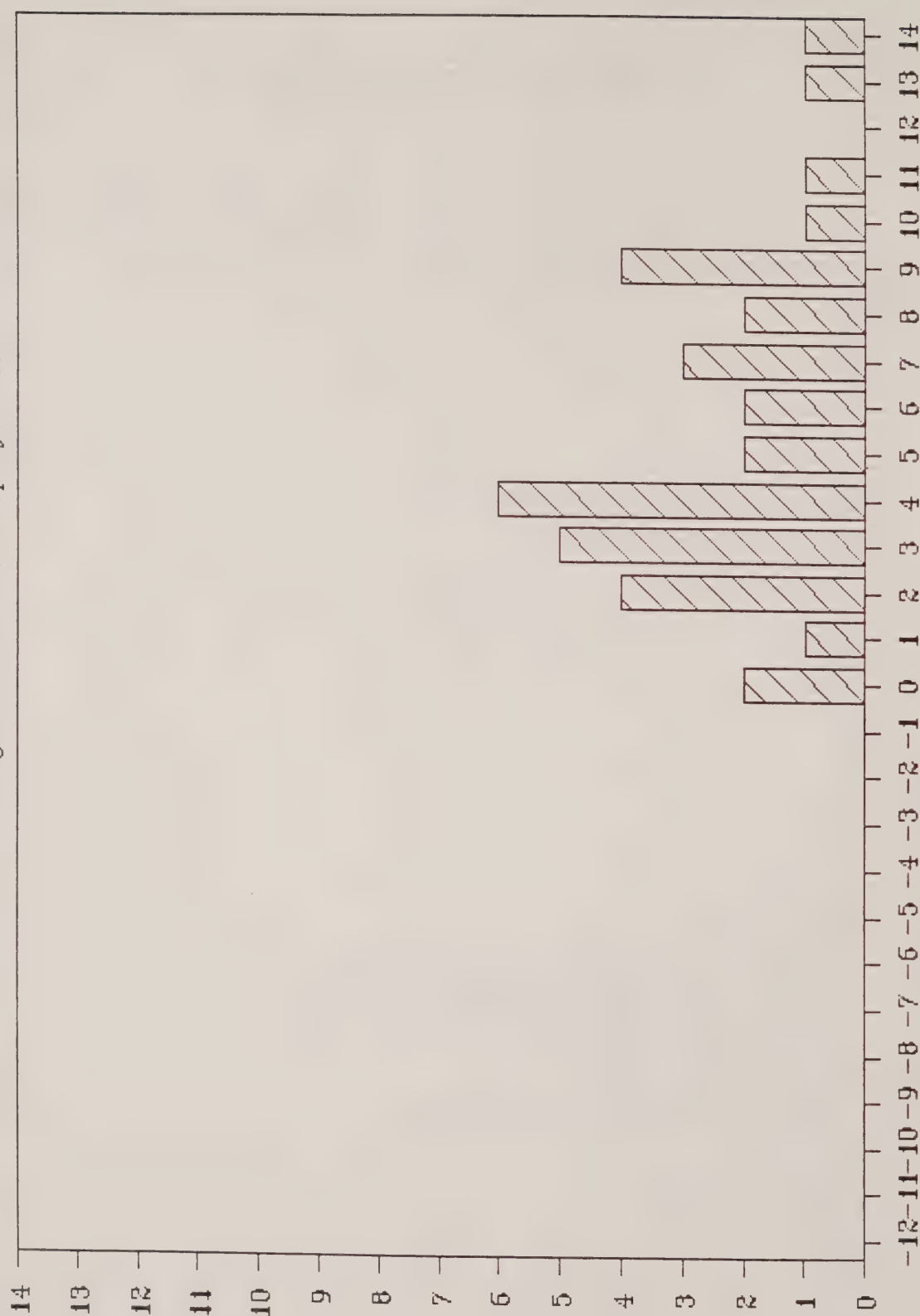


AV. ANN. % CHANGE IN F.I.R.B. EMPPL.

Figure 6B.

# DISTRIBUTION OF METRO AREAS 1969-72

Av. Ann. % Change in F.I.R.B. Employment



AV. ANN. % CHANGE IN F.I.R.B. EMPL.

## DISTRIBUTION OF METRO AREAS 1972-78

AV. Ann. % Change in F.I.R.B. Empl.

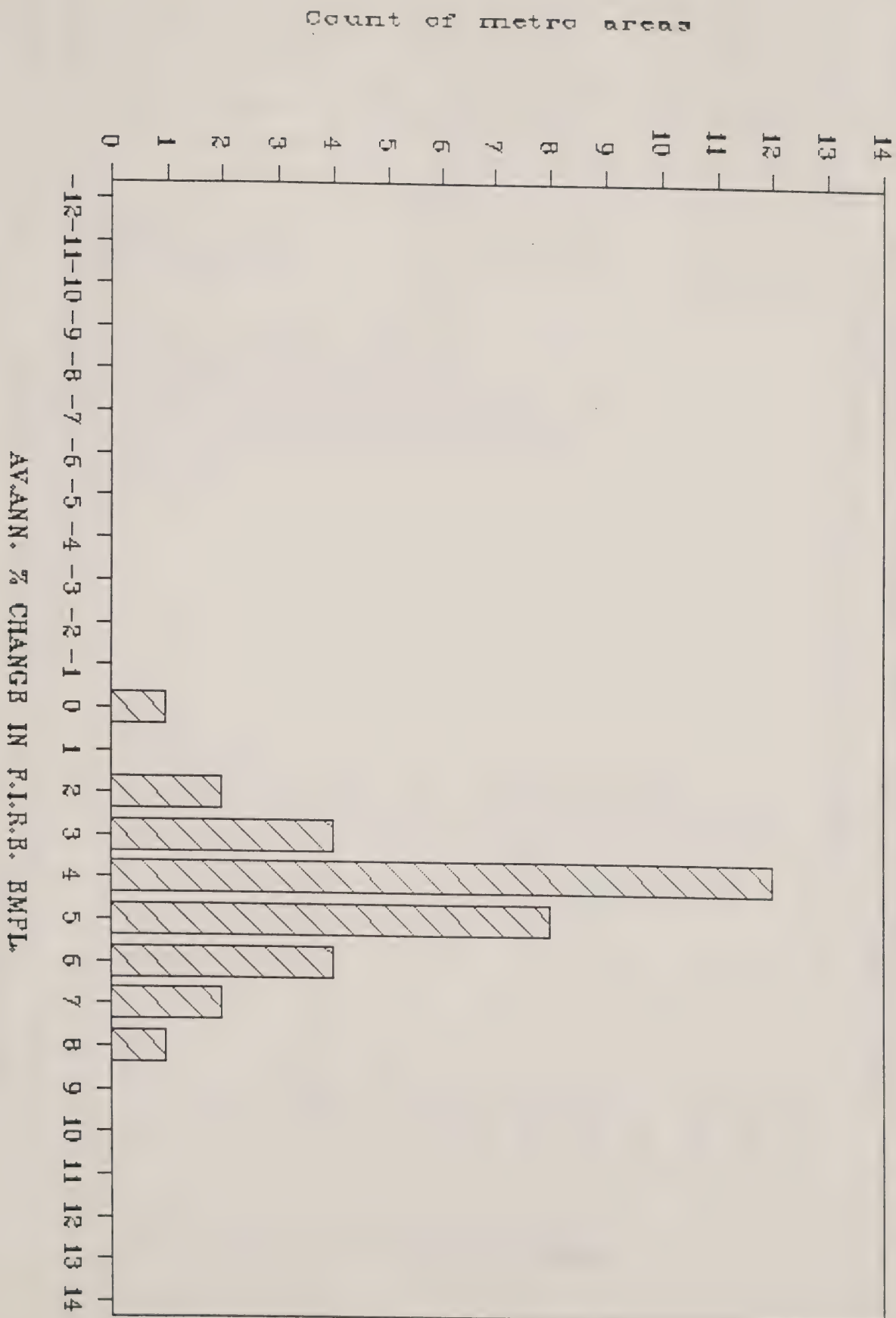
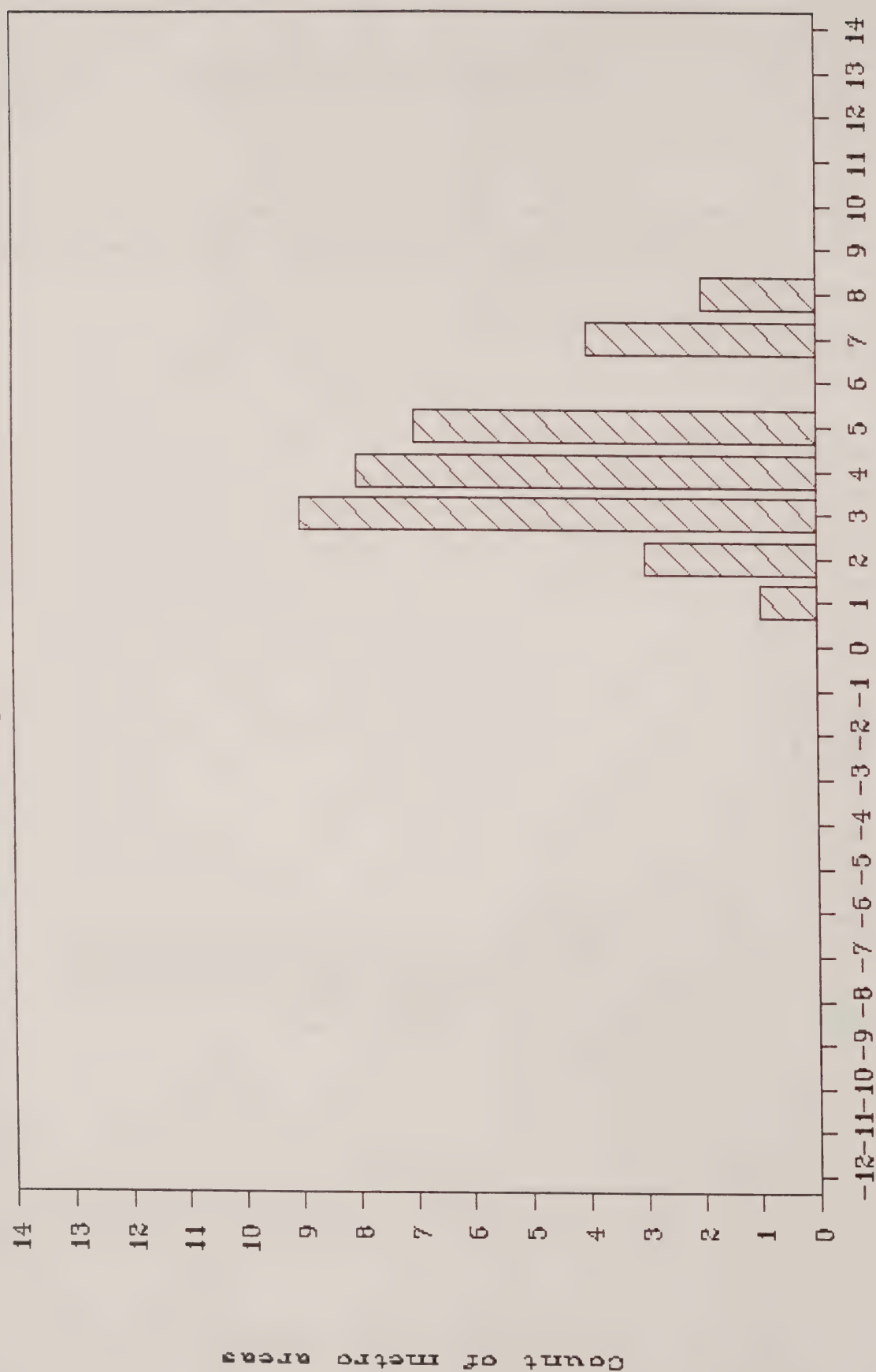


Figure 6D.

# DISTRIBUTION OF METRO AREAS 1978-84

Av. Ann. % Change in F.I.R.B. Employment

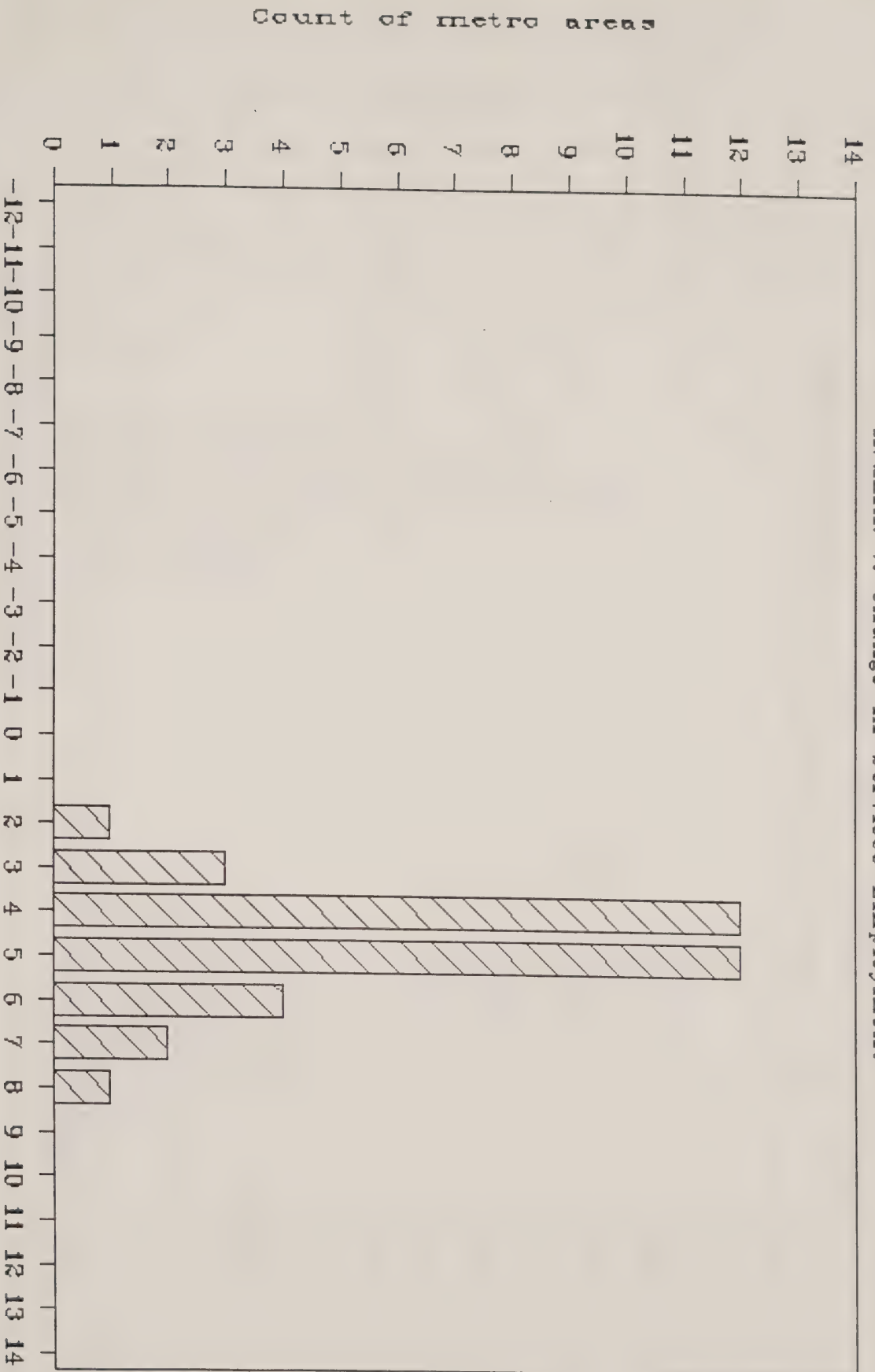


AV. ANN. % CHANGE IN F.I.R.B. BMPL.



# DISTRIBUTION OF METRO AREAS 1969-84

AV. ANN. % Change in Services Employment



AV. ANN. % CHANGE IN SERVICES EMPL.

Figure 7B.

# DISTRIBUTION OF METRO AREAS 1969-72

AV. ANN. % Change in Services Employment

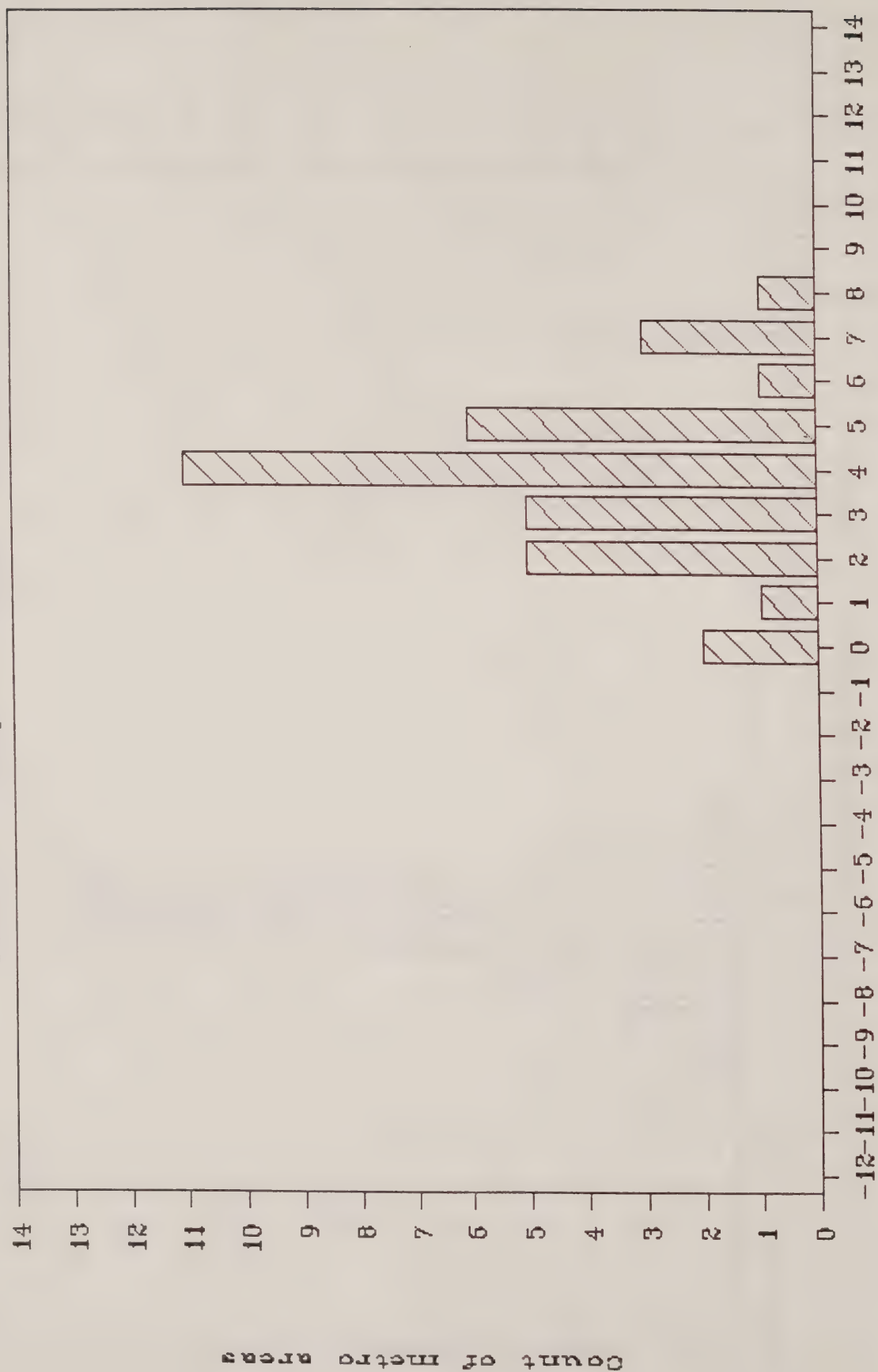
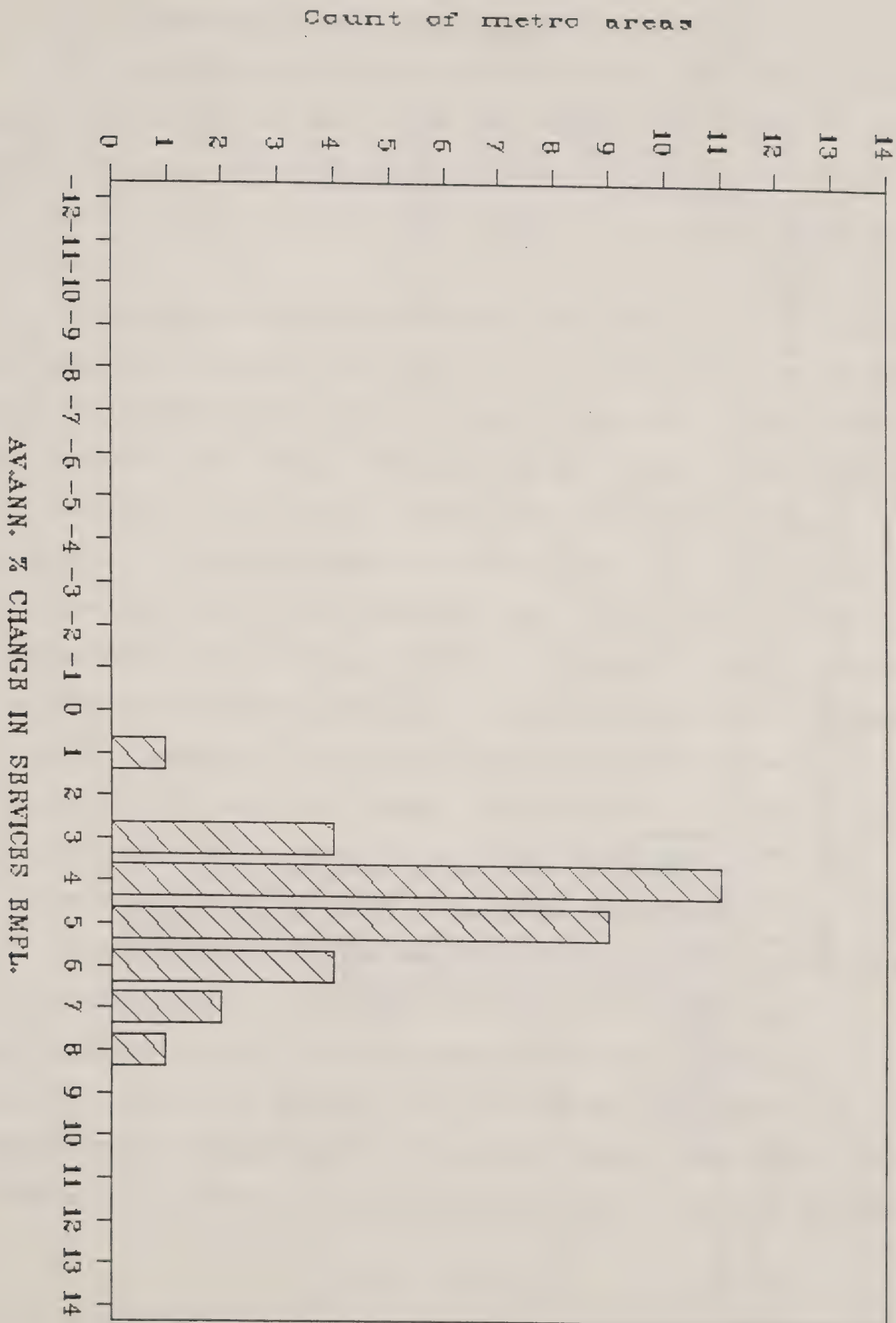


Figure 7C.

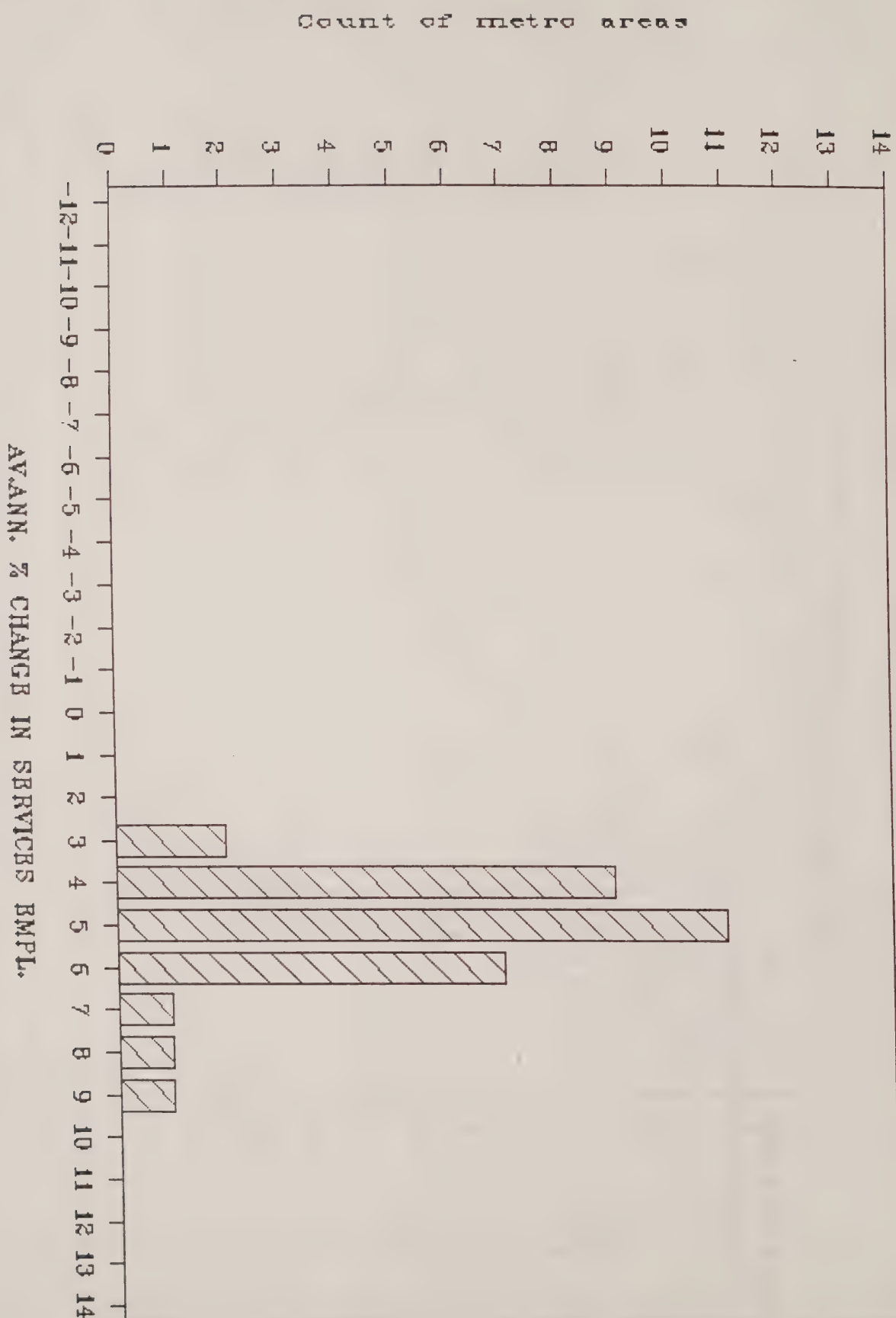
# DISTRIBUTION OF METRO AREAS 1972-78

Av. Ann. % Change in Services Empl.



# DISTRIBUTION OF METRO AREAS 1978-84

Av. Ann. % Change in Services Employment





#### 4.d. Patterns of employment growth for counties:

For counties, as for metropolitan areas, the average annual percentage change in employment was computed for Total Non-farm employment, for Manufacturing, for Retail Trade, for F.I.R.E. and for Services over the time periods 1969-84, 1969-72, 1972-78 and 1978-84.

Unlike the analysis of metropolitan areas, this section only includes the central city counties for the cities in which total city employment represented at least 80 percent of employment in the central city county. It was only for those cities that information concerning the central city county was a good indicator of the employment of the city per se. The central city counties included in the analysis were those for: Baltimore (independent city), Boston (Suffolk), Denver, El Paso, Houston (Harris), Indianapolis (Marion), Jacksonville (Duval), Memphis (Shelby), Nashville (Davidson), New Orleans, New York City (Bronx, Kings, New York, Queens, and Richmond), Oklahoma City, Philadelphia, San Antonio (Bexar), San Francisco, St. Louis (independent city), and Washington D.C. (See Appendix A).

The information in Tables 15 to 18 allows for a comparison of the evolution of employment in counties to that in metropolitan areas. Table 14 summarizes this information for Suffolk County and Boston. It confirms the decline of the county share of total employment in the metro area. Employment grew faster in the rest of the Boston area than in Suffolk County. In

the most recent period, 1978-84, this trend hinted at a reversal in some sectors. Suffolk County grew almost as fast as the metro area in the case of Retail trade, 2.27 percent vs. 2.73 percent, and F.I.R.E., 3.45 percent vs. 3.54 percent, and faster in the case of Transportation and Public Utilities, 2.11 percent vs. 1.06 percent, and of State and Local Government, 1.12 percent vs. -0.93 percent.

A similar comparison can be conducted for the other counties and their corresponding metropolitan areas.

TABLE 14. Average Annual Percent Change in Employment in Suffolk County and the Boston Metropolitan Area

|                          | 1969-84     |          | 1969-72     |          | 1972-78     |          | 1978-84     |          |
|--------------------------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|
|                          | Metro.<br>% | Co.<br>% | Metro.<br>% | Co.<br>% | Metro.<br>% | Co.<br>% | Metro.<br>% | Co.<br>% |
| Total Non-farm           | 1.80        | 0.28     | 0.25        | -1.10    | 1.46        | -0.57    | 2.92        | 1.83     |
| Private                  | 1.95        | 0.31     | -0.07       | -1.42    | 1.45        | -0.62    | 3.49        | 2.13     |
| Agr., For., Fish.        | NA          | 1.97     | NA          | NA       | NA          | NA       | NA          | 6.27     |
| Mining                   | 6.65        | 1.92     | NA          | NA       | NA          | NA       | NA          | 5.75     |
| Construction             | 0.17        | -3.27    | 1.57        | -0.80    | -5.02       | -11.12   | 4.92        | 3.96     |
| Manufacturing            | 0.62        | -2.52    | -4.22       | -6.56    | 1.87        | -0.90    | 1.85        | -2.06    |
| Transportation and P.U   | 0.60        | -0.46    | 1.75        | -0.99    | -0.43       | -2.71    | 1.06        | 2.11     |
| Wholesale Trade          | 1.73        | -2.53    | 0.44        | -3.96    | 0.08        | -5.04    | 4.06        | 0.78     |
| Retail Trade             | 1.53        | -1.09    | 0.87        | -2.69    | 0.67        | -3.56    | 2.73        | 2.27     |
| F.I.R.E.                 | 2.35        | 0.80     | 1.78        | -0.63    | 1.46        | -1.09    | 3.54        | 3.45     |
| Services                 | 3.59        | 2.83     | 1.70        | 1.81     | 3.32        | 3.37     | 4.80        | 2.80     |
| Government and Gvt. Ent. | 0.76        | 0.11     | 2.13        | 0.53     | 1.51        | -0.31    | -0.67       | 0.31     |
| Federal, Civilian        | -0.96       | -2.34    | -1.61       | -3.29    | -1.32       | -2.14    | -0.27       | -2.06    |
| Military                 | -1.10       | -5.94    | -6.45       | -11.12   | 0.01        | -9.25    | 0.55        | 0.27     |
| State and Local          | 1.57        | 2.08     | 4.97        | 5.17     | 2.42        | 1.53     | -0.93       | 1.12     |

Table 15A. Ranking of Counties on Average Annual Percent  
Change in Total Non-farm Employment, 1969-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 4.66                |
| Oklahoma County              | 3.18                |
| Bexar County - San Antonio   | 2.70                |
| Duval County - Jacksonville  | 2.67                |
| El Paso County               | 2.44                |
| Davidson County - Nashville  | 2.44                |
| Denver County                | 2.05                |
| UNITED STATES                | 2.02                |
| Shelby County - Memphis      | 1.73                |
| San Francisco County         | 0.96                |
| Marion County - Indianapolis | 0.83                |
| Orleans County - New Orleans | 0.37                |
| SUFFOLK County - BOSTON      | 0.28                |
| District of Columbia         | 0.20                |
| Baltimore (Independent city) | -0.35               |
| New York City - 5 counties   | -0.59               |
| St. Louis (Independent City) | -1.48               |
| Philadelphia County          | -1.58               |

Table 15D. Ranking of Counties on Average Annual Percent  
Change in Manufacturing Employment, 1969-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| El Paso County               | 3.31                |
| Oklahoma County              | 2.17                |
| Bexar County - San Antonio   | 2.08                |
| Harris County - Houston      | 1.39                |
| UNITED STATES                | -0.24               |
| Davidson County - Nashville  | -0.40               |
| San Francisco County         | -1.18               |
| Shelby County - Memphis      | -1.45               |
| Denver County                | -1.68               |
| District of Columbia         | -1.97               |
| Marion County - Indianapolis | -2.00               |
| SUFFOLK County - BOSTON      | -2.52               |
| Orleans County - New Orleans | -2.64               |
| New York City - 5 counties   | -4.12               |
| St. Louis (Independent city) | -4.16               |
| Baltimore (Independent city) | -4.45               |
| Philadelphia County          | -5.66               |
| Duval County - Jacksonville  | ERR                 |



Table 15E. Ranking of Counties on Average Annual Percent  
Change In Retail Trade Employment, 1969-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 4.97                |
| Davidson County - Nashville  | 4.56                |
| Bexar County - San Antonio   | 4.22                |
| Oklahoma County              | 3.70                |
| El Paso County               | 3.27                |
| Shelby County - Memphis      | 3.13                |
| Duval County - Jacksonville  | 2.86                |
| UNITED STATES                | 2.52                |
| Marion County - Indianapolis | 1.65                |
| San Francisco County         | 1.42                |
| Denver County                | 0.68                |
| Orleans County - New Orleans | 0.26                |
| Baltimore (Independent city) | -0.72               |
| SUFFOLK County - BOSTON      | -1.09               |
| New York City - 5 counties   | -1.15               |
| District of Columbia         | -1.38               |
| Philadelphia County          | -1.66               |
| St. Louis (Independent City) | -1.83               |

Table 15F. Ranking of Counties on Average Annual Percent  
Change In F.I.R.E. Employment, 1969-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 6.95                |
| El Paso County               | 5.77                |
| Bexar County - San Antonio   | 5.57                |
| Oklahoma County              | 4.67                |
| Denver County                | 4.13                |
| Shelby County - Memphis      | 4.10                |
| UNITED STATES                | 3.95                |
| Duval County - Jacksonville  | 3.94                |
| Davidson County - Nashville  | 2.24                |
| San Francisco County         | 2.01                |
| Marion County - Indianapolis | 1.64                |
| Baltimore (Independent city) | 1.43                |
| Orleans County - New Orleans | 0.97                |
| SUFFOLK County - BOSTON      | 0.80                |
| District of Columbia         | 0.65                |
| New York City - 5 counties   | 0.48                |
| Philadelphia County          | -0.37               |
| St. Louis (Independent City) | -0.46               |



Table 15G. Ranking of Counties on Average Annual Percent  
Change in Services Employment, 1969-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 5.70                |
| Bexar County - San Antonio   | 4.65                |
| Oklahoma County              | 4.59                |
| El Paso County               | 4.36                |
| Denver County                | 4.15                |
| Duval County - Jacksonville  | 3.90                |
| Davidson County - Nashville  | 3.90                |
| UNITED STATES                | 3.83                |
| Marion County - Indianapolis | 3.57                |
| San Francisco County         | 3.44                |
| Shelby County - Memphis      | 3.33                |
| SUFFOLK County - BOSTON      | 2.83                |
| District of Columbia         | 2.22                |
| Baltimore (Independent city) | 2.15                |
| Orleans County - New Orleans | 1.93                |
| New York City - 5 counties   | 1.49                |
| Philadelphia County          | 0.96                |
| St. Louis (Independent City) | 0.33                |

Note: "0" or "ERR" indicate that data are missing  
for beginning or end year.

Source: U.S. Bureau of Economic Analysis, Regional  
Economic Information System.

Table 16A. Ranking of Counties on Average Annual Percent  
Change in Total Non-farm Employment, 1969-72

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 3.72                |
| Oklahoma County              | 3.29                |
| Shelby County - Memphis      | 3.23                |
| Duval County - Jacksonville  | 2.61                |
| Denver County                | 2.49                |
| Davidson County - Nashville  | 1.90                |
| Bexar County - San Antonio   | 1.62                |
| UNITED STATES                | 1.28                |
| Orleans County - New Orleans | 0.06                |
| El Paso County               | -0.18               |
| District of Columbia         | -0.35               |
| Marion County - Indianapolis | -0.56               |
| Baltimore (Independent city) | -0.63               |
| SUFFOLK County - BOSTON      | -1.10               |
| St. Louis (Independent City) | -1.70               |
| San Francisco County         | -1.88               |
| New York City - 5 counties   | -2.12               |
| Philadelphia County          | -2.25               |

Table 16D. Ranking of Counties on Average Annual Percent  
Change in Manufacturing Employment, 1969-72

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| El Paso County               | 4.65                |
| Oklahoma County              | 2.38                |
| Denver County                | 1.20                |
| Harris County - Houston      | 0.71                |
| Bexar County - San Antonio   | 0.08                |
| Shelby County - Memphis      | -1.21               |
| Davidson County - Nashville  | -1.36               |
| UNITED STATES                | -1.96               |
| St. Louis (Independent City) | -3.32               |
| Marion County - Indianapolis | -4.08               |
| Orleans County - New Orleans | -4.48               |
| San Francisco County         | -4.50               |
| District of Columbia         | -5.19               |
| Baltimore (Independent city) | -5.70               |
| New York City - 5 counties   | -6.32               |
| SUFFOLK County - BOSTON      | -6.56               |
| Philadelphia County          | -6.60               |
| Duval County - Jacksonville  | ERR                 |

Table 16E . Ranking of Counties on Average Annual Percent  
Change in Retail Trade Employment, 1969-72

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Shelby County - Memphis      | 6.44                |
| Oklahoma County              | 5.47                |
| Davidson County - Nashville  | 5.04                |
| Denver County                | 4.83                |
| Harris County - Houston      | 3.97                |
| El Paso County               | 3.61                |
| Duval County - Jacksonville  | 3.33                |
| Bexar County - San Antonio   | 3.29                |
| UNITED STATES                | 2.29                |
| Orleans County - New Orleans | 0.44                |
| Marion County - Indianapolis | 0.28                |
| Baltimore (Independent city) | -0.76               |
| St. Louis (Independent City) | -2.03               |
| SUFFOLK County - BOSTON      | -2.69               |
| San Francisco County         | -2.73               |
| New York City - 5 counties   | -2.76               |
| Philadelphia County          | -3.00               |
| District of Columbia         | -3.12               |

Table 16F. Ranking of Counties on Average Annual Percent  
Change in F.I.R.E. Employment, 1969-72

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| El Paso County               | 10.09               |
| Harris County - Houston      | 8.49                |
| Shelby County - Memphis      | 7.89                |
| Oklahoma County              | 7.65                |
| Duval County - Jacksonville  | 7.21                |
| Bexar County - San Antonio   | 6.80                |
| Denver County                | 5.14                |
| UNITED STATES                | 4.55                |
| Orleans County - New Orleans | 1.76                |
| Marion County - Indianapolis | 0.97                |
| Davidson County - Nashville  | 0.83                |
| Baltimore (Independent city) | 0.68                |
| Philadelphia County          | 0.33                |
| San Francisco County         | 0.33                |
| SUFFOLK County - BOSTON      | -0.63               |
| District of Columbia         | -0.75               |
| St. Louis (Independent City) | -0.76               |
| New York City - 5 counties   | -1.35               |

Table 16G. Ranking of Counties on Average Annual Percent  
Change in Services Employment, 1969-72

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Shelby County - Memphis      | 4.92                |
| Duval County - Jacksonville  | 4.48                |
| Harris County - Houston      | 4.29                |
| Oklahoma County              | 4.23                |
| Bexar County - San Antonio   | 4.10                |
| El Paso County               | 3.93                |
| Denver County                | 3.51                |
| UNITED STATES                | 3.15                |
| Marion County - Indianapolis | 2.71                |
| Davidson County - Nashville  | 2.15                |
| Baltimore (Independent city) | 1.82                |
| SUFFOLK County - BOSTON      | 1.81                |
| Orleans County - New Orleans | 0.91                |
| Philadelphia County          | 0.64                |
| San Francisco County         | 0.34                |
| District of Columbia         | 0.16                |
| St. Louis (Independent City) | -0.11               |
| New York City - 5 counties   | -0.83               |



Table 17A. Ranking of Counties on Average Annual Percent  
Change in Total Non-farm Employment, 1972-78

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 6.50                |
| El Paso County               | 4.08                |
| Oklahoma County              | 3.00                |
| Duval County - Jacksonville  | 2.79                |
| Davidson County - Nashville  | 2.73                |
| UNITED STATES                | 2.63                |
| Bexar County - San Antonio   | 1.97                |
| Shelby County - Memphis      | 1.86                |
| Marion County - Indianapolis | 1.82                |
| Denver County                | 1.77                |
| San Francisco County         | 1.61                |
| Orleans County - New Orleans | 1.36                |
| District of Columbia         | 0.55                |
| Baltimore (Independent city) | -0.50               |
| St. Louis (Independent City) | -0.56               |
| SUFFOLK County - BOSTON      | -0.57               |
| New York City - 5 counties   | -1.50               |
| Philadelphia County          | -2.16               |

Table 17D. Ranking of Counties on Average Annual Percent  
Change in Manufacturing Employment, 1972-78

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 5.10                |
| Bexar County - San Antonio   | 3.50                |
| El Paso County               | 2.51                |
| Oklahoma County              | 2.06                |
| Duval County - Jacksonville  | 1.45                |
| UNITED STATES                | 1.32                |
| Shelby County - Memphis      | 0.48                |
| Marion County - Indianapolis | 0.42                |
| Davidson County - Nashville  | -0.39               |
| San Francisco County         | -0.50               |
| Denver County                | -0.86               |
| SUFFOLK County - BOSTON      | -0.90               |
| Orleans County - New Orleans | -1.27               |
| District of Columbia         | -2.01               |
| St. Louis (Independent City) | -2.20               |
| Baltimore (Independent city) | -3.08               |
| New York City - 5 counties   | -3.70               |
| Philadelphia County          | -5.50               |

Table 17E. Ranking of Counties on Average Annual Percent Change in Retail Trade Employment, 1972-78

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 6.16                |
| El Paso County               | 4.98                |
| Davidson County - Nashville  | 4.69                |
| Shelby County - Memphis      | 4.30                |
| Bexar County - San Antonio   | 4.02                |
| Oklahoma County              | 3.80                |
| Marion County - Indianapolis | 3.19                |
| UNITED STATES                | 2.98                |
| Duval County - Jacksonville  | 2.53                |
| San Francisco County         | 2.20                |
| Orleans County - New Orleans | 1.93                |
| Denver County                | -1.45               |
| St. Louis (Independent City) | -1.52               |
| Philadelphia County          | -1.93               |
| New York City - 5 counties   | -2.09               |
| District of Columbia         | -2.24               |
| Baltimore (Independent city) | -2.42               |
| SUFFOLK County - BOSTON      | -3.56               |

Table 17F. Ranking of Counties on Average Annual Percent Change in F.I.R.E. Employment, 1972-78

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 6.61                |
| El Paso County               | 4.76                |
| Duval County - Jacksonville  | 4.45                |
| Bexar County - San Antonio   | 4.37                |
| UNITED STATES                | 4.00                |
| Oklahoma County              | 3.89                |
| Denver County                | 3.85                |
| Shelby County - Memphis      | 3.13                |
| San Francisco County         | 3.00                |
| Davidson County - Nashville  | 2.75                |
| Orleans County - New Orleans | 2.68                |
| Marion County - Indianapolis | 1.87                |
| District of Columbia         | 1.63                |
| Baltimore (Independent city) | 1.52                |
| St. Louis (Independent City) | 0.48                |
| Philadelphia County          | -0.79               |
| New York City - 5 counties   | -1.08               |
| SUFFOLK County - BOSTON      | -1.09               |

Table 17G. Ranking of Counties on Average Annual Percent  
Change in Services Employment, 1972-78

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 6.84                |
| Oklahoma County              | 5.12                |
| El Paso County               | 4.93                |
| San Francisco County         | 4.19                |
| Davidson County - Nashville  | 4.06                |
| UNITED STATES                | 3.81                |
| Marion County - Indianapolis | 3.65                |
| Bexar County - San Antonio   | 3.55                |
| SUFFOLK County - BOSTON      | 3.37                |
| Shelby County - Memphis      | 2.48                |
| District of Columbia         | 2.33                |
| Duval County - Jacksonville  | 2.32                |
| Orleans County - New Orleans | 2.01                |
| St. Louis (Independent City) | 1.60                |
| New York City - 5 counties   | 0.74                |
| Baltimore (Independent city) | 0.65                |
| Philadelphia County          | 0.34                |
| Denver County                | NA                  |

Table 18A. Ranking of Counties on Average Annual Percent  
Change in Total Non-farm Employment, 1978-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Bexar County - San Antonio   | 3.99                |
| Harris County - Houston      | 3.32                |
| Oklahoma County              | 3.32                |
| Duval County - Jacksonville  | 2.58                |
| Davidson County - Nashville  | 2.41                |
| El Paso County               | 2.15                |
| Denver County                | 2.12                |
| SUFFOLK County - BOSTON      | 1.83                |
| UNITED STATES                | 1.78                |
| San Francisco County         | 1.76                |
| New York City - 5 counties   | 1.11                |
| Shelby County - Memphis      | 0.85                |
| Marion County - Indianapolis | 0.54                |
| District of Columbia         | 0.13                |
| Baltimore (Independent city) | -0.06               |
| Orleans County - New Orleans | -0.46               |
| Philadelphia County          | -0.67               |
| St. Louis (Independent City) | -2.29               |

Table 18D. Ranking of Counties on Average Annual Percent  
Change in Manufacturing Employment, 1978-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| El Paso County               | 3.45                |
| Oklahoma County              | 2.17                |
| Bexar County - San Antonio   | 1.67                |
| Duval County - Jacksonville  | 1.35                |
| Davidson County - Nashville  | 0.08                |
| San Francisco County         | -0.17               |
| District of Columbia         | -0.27               |
| UNITED STATES                | -0.91               |
| Harris County - Houston      | -1.86               |
| SUFFOLK County - BOSTON      | -2.06               |
| Orleans County - New Orleans | -3.06               |
| Marion County - Indianapolis | -3.33               |
| New York City - 5 counties   | -3.42               |
| Shelby County - Memphis      | -3.47               |
| Denver County                | -3.88               |
| Baltimore (Independent city) | -5.18               |
| Philadelphia County          | -5.34               |
| St. Louis (Independent City) | -6.50               |



Table 18E. Ranking of Counties on Average Annual Percent  
Change in Retail Trade Employment, 1978-84

|                              | AnAvg |
|------------------------------|-------|
| Bexar County - San Antonio   | 4.89  |
| Harris County - Houston      | 4.29  |
| Davidson County - Nashville  | 4.19  |
| Duval County - Jacksonville  | 2.96  |
| San Francisco County         | 2.78  |
| Oklahoma County              | 2.73  |
| SUFFOLK County - BOSTON      | 2.27  |
| UNITED STATES                | 2.17  |
| El Paso County               | 1.42  |
| Baltimore (Independent city) | 1.04  |
| Marion County - Indianapolis | 0.82  |
| Denver County                | 0.80  |
| New York City - 5 counties   | 0.62  |
| District of Columbia         | 0.38  |
| Shelby County - Memphis      | 0.37  |
| Philadelphia County          | -0.71 |
| Orleans County - New Orleans | -1.48 |
| St. Louis (Independent City) | -2.04 |

Table 18F. Ranking of Counties on Average Annual Percent  
Change in F.I.R.E. Employment, 1978-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Harris County - Houston      | 6.51                |
| Bexar County - San Antonio   | 6.17                |
| El Paso County               | 4.67                |
| Oklahoma County              | 3.98                |
| Denver County                | 3.91                |
| UNITED STATES                | 3.60                |
| SUFFOLK County - BOSTON      | 3.45                |
| Shelby County - Memphis      | 3.21                |
| New York City - 5 counties   | 3.00                |
| Davidson County - Nashville  | 2.44                |
| San Francisco County         | 1.86                |
| Duval County - Jacksonville  | 1.85                |
| Marion County - Indianapolis | 1.74                |
| Baltimore (Independent city) | 1.72                |
| District of Columbia         | 0.37                |
| Philadelphia County          | -0.30               |
| Orleans County - New Orleans | -1.10               |
| St. Louis (Independent City) | -1.24               |

Table 18G. Ranking of Counties on Average Annual Percent  
Change in Services Employment, 1978-84

|                              | Avg. Ann.<br>% Chg. |
|------------------------------|---------------------|
| Bexar County - San Antonio   | 6.04                |
| Harris County - Houston      | 5.26                |
| Duval County - Jacksonville  | 5.22                |
| Davidson County - Nashville  | 4.62                |
| San Francisco County         | 4.27                |
| Oklahoma County              | 4.24                |
| UNITED STATES                | 4.19                |
| El Paso County               | 4.01                |
| Marion County - Indianapolis | 3.92                |
| Baltimore (Independent city) | 3.85                |
| New York City - 5 counties   | 3.44                |
| Shelby County - Memphis      | 3.40                |
| District of Columbia         | 3.15                |
| SUFFOLK County - BOSTON      | 2.80                |
| Orleans County - New Orleans | 2.36                |
| Philadelphia County          | 1.75                |
| St. Louis (Independent City) | -0.71               |
| Denver County                | ERR                 |

#### IV. Central City Counties versus their Metropolitan Areas:

##### 1. Counties' share of population in metropolitan areas:

Table 19 presents the share of population in central city counties as percent of the population in metropolitan areas for 1959, 1972 and 1984; table 20 provides population levels in counties and metro areas for the same years. A few counties are coterminous with their metro areas and show no change over time: Erie (Buffalo), El Paso, Los Angeles, Maricopa (Phoenix), San Diego, and Santa Clara (San Jose).

All other central city counties represented a declining share of metropolitan area population over the period 1959 to 1984. The population in the rest of the metropolitan area grew faster than that in central city counties.

Central city counties also vary greatly in terms of the share of metropolitan population which they represent. In 1959, Bexar County (674,600 persons), represented a high of 93.36 percent of San Antonio metro population (722,600 persons) while Suffolk County (786,500 persons) represented a low of 23.57 percent of Boston metro population (3,337,000 persons). By 1972, Bexar (876,600 persons) accounted for 93.14 percent of San Antonio metro area (941,200 persons) and Suffolk accounted (736,100 persons) for 19.6 percent of Boston metro (3,755,300 persons). By 1984, Bexar with 1,092,100 persons accounted for 91.89 percent of San Antonio metro (1,188,500 persons) while Suffolk with 658,800 persons accounted for 17.83 percent of Boston metro (3,695,400 persons).

Table 19. Population in Central City Counties as Percent of Metropolitan Area Population:  
1959, 1972, and 1984

|               | 1959<br>% | 1972<br>% | 1984<br>% |
|---------------|-----------|-----------|-----------|
| Atlanta       | NA        | 59.15     | 46.92     |
| Baltimore     | 51.58     | 41.81     | 34.02     |
| BOSTON        | 23.57     | 19.60     | 17.83     |
| Buffalo       | 100.00    | 100.00    | 100.00    |
| Chicago       | 92.81     | 89.68     | 86.00     |
| Cincinnati    | 68.25     | 66.05     | 61.36     |
| Cleveland     | 86.30     | 82.80     | 78.23     |
| Columbus      | 71.26     | 72.31     | 69.88     |
| Dallas        | 85.00     | 84.05     | 78.20     |
| Denver        | 57.43     | 44.13     | 31.89     |
| Detroit       | 65.82     | 57.95     | 50.65     |
| El Paso       | 100.00    | 100.00    | 100.00    |
| Fort Worth    | 90.35     | 89.72     | 88.28     |
| Houston       | 91.80     | 91.11     | 86.82     |
| Indianapolis  | 73.87     | 70.65     | 64.86     |
| Jacksonville  | 87.22     | 85.12     | 77.04     |
| Kansas City   | 60.89     | 58.57     | 55.60     |
| Los Angeles   | 100.00    | 100.00    | 100.00    |
| Memphis       | 86.29     | 86.45     | 78.07     |
| Milwaukee     | 81.01     | 74.76     | 68.45     |
| Minn.-St.Paul | 78.53     | 70.71     | 64.44     |
| Nashville     | 66.98     | 62.29     | 54.52     |
| New Orleans   | 66.28     | 52.08     | 42.39     |
| New York      | NA        | 86.80     | 85.53     |
| Oklahoma City | 75.16     | 71.96     | 64.66     |
| Philadelphia  | 46.12     | 39.13     | 34.53     |
| Phoenix       | 100.00    | 100.00    | 100.00    |
| Pittsburgh    | 68.78     | 67.48     | 64.88     |
| San Antonio   | 93.36     | 93.14     | 91.89     |
| San Diego     | 100.00    | 100.00    | 100.00    |
| San Francisco | 55.60     | 47.72     | 46.23     |
| San Jose      | 100.00    | 100.00    | 100.00    |
| Seattle       | 84.45     | 81.26     | 78.25     |
| St. Louis     | 34.66     | 24.05     | 17.90     |
| Washington    | 34.60     | 23.51     | 18.16     |

Note: NA indicates that data are unavailable.



Table 20. Population in Central City Counties and Metropolitan Areas:  
1959, 1972 and 1984

(1000'S)

|                 | 1959<br>County | 1959<br>Metro. | 1972<br>County | 1972<br>Metro. | 1984<br>County | 1984<br>Metro. |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Atlanta         | NA             | 1224.1         | 1069.7         | 1808.6         | 1116.7         | 2380.0         |
| Baltimore       | 928.5          | 1800           | 899.8          | 2152.2         | 763.6          | 2244.7         |
| BOSTON          | 786.5          | 3337           | 736.1          | 3755.3         | 658.8          | 3695.4         |
| Buffalo         | 1058.5         | 1058.5         | 1112.8         | 1112.8         | 985.3          | 985.3          |
| Chicago         | 5081.3         | 5475.2         | 5505.9         | 6139.2         | 5270.4         | 6128.3         |
| Cincinnati      | 861            | 1261.5         | 913.9          | 1383.7         | 864.0          | 1408.1         |
| Cleveland       | 1641.9         | 1902.5         | 1670.0         | 2016.9         | 1460.6         | 1867.0         |
| Columbus        | 680.5          | 954.9          | 857.2          | 1185.5         | 893.8          | 1279.0         |
| Dallas          | 934.2          | 1099           | 1353.3         | 1610.1         | 1723.4         | 2203.7         |
| Denver          | 481.5          | 838.4          | 525.8          | 1191.4         | 504.6          | 1582.5         |
| Detroit         | 2647.1         | 4021.7         | 2652.5         | 4576.9         | 2186.1         | 4315.8         |
| El Paso         | 308.3          | 308.3          | 378.4          | 378.4          | 526.5          | 526.5          |
| Fort Worth      | 528.7          | 585.2          | 721.9          | 804.6          | 1010.3         | 1144.4         |
| Houston         | 1220.5         | 1329.5         | 1836.3         | 2015.5         | 2747.3         | 3164.2         |
| Indianapolis    | 690.2          | 934.4          | 796.5          | 1127.4         | 774.8          | 1194.6         |
| Jacksonville    | 442.2          | 507            | 541.1          | 635.7          | 612.7          | 795.3          |
| Kansas City     | 723            | 1187.4         | 816.4          | 1393.8         | 821.1          | 1476.7         |
| Los Angeles     | 5942.6         | 5942.6         | 7056.6         | 7056.6         | 7901.2         | 7901.2         |
| Memphis         | 619.1          | 717.5          | 741.1          | 857.3          | 729.6          | 934.6          |
| Milwaukee       | 1020.1         | 1259.2         | 1058.6         | 1416.0         | 954.1          | 1393.8         |
| Minn. -St. Paul | 1247.6         | 1588.7         | 1417.0         | 2004.0         | 1437.6         | 2230.9         |
| Nashville       | 394.7          | 589.3          | 456.3          | 732.5          | 485.4          | 890.3          |
| New Orleans     | 618.1          | 932.5          | 595.0          | 1142.4         | 559.1          | 1318.8         |
| New York        | NA             | 8708.6         | 7835.5         | 9026.7         | 7164.8         | 8376.9         |
| Oklahoma City   | 432.1          | 574.9          | 549.2          | 763.2          | 622.4          | 962.6          |
| Philadelphia    | 1987.4         | 4309.4         | 1893.1         | 4837.6         | 1646.7         | 4768.4         |
| Phoenix         | 642.5          | 642.5          | 1087.2         | 1087.2         | 1714.8         | 1714.8         |
| Pittsburgh      | 1616.3         | 2350           | 1573.5         | 2331.9         | 1409.8         | 2172.8         |
| San Antonio     | 674.6          | 722.6          | 876.6          | 941.2          | 1092.1         | 1188.5         |
| San Diego       | 1016.6         | 1016.6         | 1433.1         | 1433.1         | 2063.9         | 2063.9         |
| San Francisco   | 728.5          | 1310.3         | 700.2          | 1467.4         | 712.8          | 1541.9         |
| San Jose        | 632.1          | 632.1          | 1138.8         | 1138.8         | 1371.5         | 1371.5         |
| Seattle         | 924.5          | 1094.7         | 1138.9         | 1401.6         | 1324.0         | 1692.0         |
| St. Louis       | 739.3          | 2133           | 579.6          | 2409.6         | 429.3          | 2398.4         |

Most of the counties which showed the greatest decline in percentage share of metro area population during the recent period 1972-1974 were also among those which showed among the greatest decline during the previous period, 1959-1972.

|                      | 1959<br>% | 1972<br>% | 1984<br>% |
|----------------------|-----------|-----------|-----------|
| Baltimore City       | 51.58     | 41.81     | 34.02     |
| Denver               | 57.43     | 44.13     | 31.89     |
| Detroit (Wayne)      | 65.82     | 57.95     | 50.65     |
| Jacksonville (Duval) | 87.22     | 85.12     | 77.04     |
| Memphis (Shelby)     | 86.29     | 86.45     | 78.07     |
| New Orleans          | 66.28     | 52.08     | 42.39     |
| St. Louis            | 34.66     | 24.05     | 17.90     |
| Washington (DC)      | 34.60     | 23.51     | 18.16     |

2. Counties' share of metropolitan area employment:

2.a. Counties' share of total employment:

Between 1969 and 1984, all central city counties accounted for a decreasing share of metropolitan area total employment either because there was less employment growth within the county than in the metro area, or more employment decline (see table 21). Only 3 counties represented a slightly increasing share of metropolitan area employment: Franklin Co. (Columbus), Tarrant Co. (Fort Worth) and Kings Co. (Seattle).

Central city counties vary greatly in the share of metropolitan area employment for which they account. In 1969, Harris Co. (Houston) accounted for the highest share, 94.81 percent, and Suffolk Co. (Boston) represented the lowest share, 33.25 percent. By 1984, Bexar Co. (San Antonio) represented the highest share, 93.48 percent, and Suffolk Co. still represented the lowest share, 26.58 percent.

Table 21. County Share of Metropolitan Employment: 1969, 1972, 1978 and 1984

|                 | 1969<br>% | 1972<br>% | 1978<br>% | 1984<br>% | Central City County                      |
|-----------------|-----------|-----------|-----------|-----------|------------------------------------------|
| Atlanta         | 74.87     | 74.10     | 70.30     | 64.89     | Fulton, De Kalb                          |
| Baltimore       | 55.78     | 53.57     | 46.67     | 43.03     | Baltimore City                           |
| BOSTON          | 33.25     | 31.93     | 28.31     | 26.58     | Suffolk                                  |
| Buffalo         | 100.00    | 100.00    | 100.00    | 100.00    | Erie                                     |
| Chicago         | 93.83     | 92.53     | 90.16     | 87.13     | Cook                                     |
| Cincinnati      | 81.53     | 79.89     | 77.77     | 75.67     | Hamilton                                 |
| Cleveland       | 89.92     | 88.63     | 86.37     | 84.37     | Cuyahoga                                 |
| Columbus        | 76.42     | 77.40     | 77.23     | 78.42     | Franklin                                 |
| Dallas          | 90.54     | 90.00     | 89.21     | 88.04     | Dallas                                   |
| Denver          | 70.96     | 65.66     | 56.56     | 51.10     | Denver                                   |
| Detroit         | 66.23     | 64.23     | 57.26     | 51.95     | Wayne                                    |
| El Paso         | 100.00    | 100.00    | 100.00    | 100.00    | El Paso                                  |
| Fort Worth      | 91.73     | 92.36     | 92.31     | 92.58     | Tarrant                                  |
| Houston         | 94.81     | 94.54     | 93.75     | 92.93     | Harris                                   |
| Indianapolis    | 84.42     | 82.56     | 79.95     | 78.24     | Marion                                   |
| Jacksonville    | 90.12     | 89.69     | 87.76     | 85.79     | Duval                                    |
| Kansas City     | 68.23     | 65.99     | 62.95     | 60.21     | Clay, Jackson, Platte                    |
| Los Angeles     | 100.00    | 100.00    | 100.00    | 100.00    | Los Angeles                              |
| Memphis         | 91.13     | 90.97     | 90.97     | 90.65     | Shelby                                   |
| Milwaukee       | 81.45     | 79.76     | 75.83     | 72.43     | Milwaukee                                |
| Minn. -St. Paul | 85.07     | 82.90     | 79.52     | 78.25     | Hennepin, Ramsey                         |
| Nashville       | 73.54     | 72.33     | 71.30     | 70.46     | Davidson                                 |
| New Orleans     | 70.54     | 67.61     | 61.14     | 54.80     | Orleans                                  |
| New York        | 90.29     | 89.37     | 87.61     | 86.63     | Bronx, Kings, New York, Queens, Richmond |
| Oklahoma City   | 83.27     | 81.82     | 80.32     | 79.45     | Oklahoma                                 |
| Philadelphia    | 49.64     | 46.77     | 40.39     | 36.08     | Philadelphia                             |
| Phoenix         | 100.00    | 100.00    | 100.00    | 100.00    | Maricopa                                 |
| Pittsburgh      | 75.57     | 74.50     | 73.72     | 74.20     | Allegheny                                |
| San Antonio     | 94.67     | 94.39     | 93.38     | 93.48     | Bexar                                    |
| San Diego       | 100.00    | 100.00    | 100.00    | 100.00    | San Diego                                |
| San Francisco   | 66.41     | 64.25     | 61.14     | 59.09     | San Francisco                            |
| San Jose        | 100.00    | 100.00    | 100.00    | 100.00    | Santa Clara                              |
| Seattle         | 85.91     | 87.21     | 86.57     | 85.95     | Kings                                    |
| St. Louis       | 43.52     | 41.66     | 36.27     | 29.56     | St. Louis City                           |
| Washington      | 44.93     | 41.29     | 37.10     | 31.88     | District of Columbia                     |



2.b. Counties' share of metropolitan area employment by industrial sector:

Table 22 presents central city counties' share of metropolitan area employment by industrial sector to help assess whether employment grows consistently faster in the metro area across industrial sectors.

This trend is certainly true for Suffolk Co. and Boston (table 22C). County employment as percent of metro employment declined consistently between 1969 and 1984, with the exception of slight percentage point gains for the recent period 1978-84 for Transportation and Public Utilities, from 38.78 percent in 1978 to 41.27 percent in 1984, and for State and Local Government, from 30.16 percent in 1978 to 34.10 percent in 1984. In the case of the Transportation sector, employment grew at a 2.11 percent annual rate in Suffolk Co. as compared to a 1.06 percent annual rate in the metro area. This discrepancy might be due to the increased activity of Boston' airport which is located in Suffolk Co.

For the State and Local Government sector, employment in the city of Boston per se, which captured 95 percent of Suffolk Co. employment, increased at an annual rate of 1.12 percent between 1978 and 1984 while employment in other communities of the Boston metropolitan area declined at an annual rate of -0.93 percent. The reduction in local government tax levies due to the implementation of Proposition 2 1/2 during this period affected



local governments in the Boston metropolitan area more than the city of Boston's government. For the whole time period, 1969-84, the annual rates were 2.08 percent for Suffolk Co. and 1.57 percent for the Boston metropolitan area.

The sectors with the highest ratio of county to metro employment for Boston were F.I.R.E. and Federal Civilian activity. County employment accounted for 62.61 percent of metropolitan F.I.R.E. employment in 1969, 58.27 percent in 1972, 51.68 percent in 1978 and 49.77 percent in 1984. It accounted for 57.19 percent of metropolitan Federal employment in 1969, 54.31 percent in 1972, 50.04 percent in 1978 and 46.36 percent in 1984.

The sectors with the lowest ratio of county to metropolitan employment were mining, construction and manufacturing. Suffolk Co. employment in mining represented 9.58 percent of metropolitan employment in the industry in 1984. County employment accounted for 18.30 percent of metropolitan manufacturing employment in 1969, 16.99 percent in 1972, 14.40 percent in 1978 and 11.39 percent in 1984. For construction, Suffolk county employment accounted for 26.33 percent of metro employment in 1969, 24.52 percent in 1972, 16.47 percent in 1978 and 15.58 percent in 1984. Increasingly, construction companies which build in Suffolk Co. were headquartered outside the city.

Tables 22A to 22AI provide the same information for all the counties and metro areas in this study.

Table 22A. Ratio of Employment in Fulton and DeKalb Counties to Atlanta Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 74.87 | 74.10 | 70.30 | 64.89 |
| Farm                                  | 7.97  | 8.10  | 7.89  | 7.90  |
| Non-farm                              | 75.80 | 74.81 | 70.84 | 65.22 |
| Private                               | 76.46 | 75.46 | 71.45 | 65.56 |
| Ag.Serv., For., Fish., and Other      | 61.26 | ERR   | ERR   | ERR   |
| Mining                                | ERR   | ERR   | ERR   | ERR   |
| Construction                          | 74.73 | 63.97 | 57.90 | 51.33 |
| Manufacturing                         | 53.51 | 58.52 | 56.52 | 49.35 |
| Transportation and Public Utilities   | 89.56 | 81.81 | 74.23 | 68.17 |
| Wholesale Trade                       | 94.70 | 95.23 | 85.06 | 76.26 |
| Retail Trade                          | 77.78 | 75.65 | 68.94 | 59.92 |
| Finance, Insurance and Real Estate    | 90.00 | 85.14 | 78.35 | 75.04 |
| Services                              | 84.72 | 81.58 | 77.43 | 74.20 |
| Government and Government Enterprises | 72.00 | 71.25 | 67.58 | 63.18 |
| Federal, Civilian                     | 78.50 | 79.70 | 83.90 | 80.21 |
| Military                              | 69.16 | 70.02 | 58.53 | 51.06 |
| State and Local                       | 70.13 | 68.81 | 64.04 | 60.81 |

Table 22B. Ratio of Employment in Baltimore City to Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 55.78 | 53.57 | 46.67 | 43.03 |
| Farm                                  | 0.00  | 0.00  | 0.00  | 0.00  |
| Non-farm                              | 56.28 | 54.00 | 47.04 | 43.34 |
| Private                               | 62.00 | 58.68 | 50.31 | 46.20 |
| Ag.Serv., For., Fish., and Other      | ERR   | ERR   | ERR   | ERR   |
| Mining                                | ERR   | ERR   | ERR   | ERR   |
| Construction                          | 52.46 | 47.66 | ERR   | 32.56 |
| Manufacturing                         | 53.03 | 51.65 | 45.90 | 38.35 |
| Transportation and Public Utilities   | 74.37 | 72.90 | 69.70 | 56.60 |
| Wholesale Trade                       | 76.57 | 68.07 | ERR   | 49.55 |
| Retail Trade                          | 58.17 | 52.80 | 41.48 | 38.65 |
| Finance, Insurance and Real Estate    | 76.42 | 69.57 | 61.07 | 57.27 |
| Services                              | 67.24 | 63.85 | 55.20 | 52.44 |
| Government and Government Enterprises | 37.59 | 38.90 | 37.08 | 32.85 |
| Federal, Civilian                     | 24.66 | 22.76 | 19.50 | 18.20 |
| Military                              | 17.02 | 13.03 | 13.68 | 13.67 |
| State and Local                       | 53.39 | 53.54 | 48.89 | 45.09 |

Table 22C. Ratio of Employment in Suffolk County to Boston Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 33.25 | 31.93 | 28.31 | 26.58 |
| Farm                                  | 0.00  | 0.00  | 0.00  | 0.00  |
| Non-farm                              | 33.37 | 32.04 | 28.39 | 26.63 |
| Private                               | 32.64 | 31.33 | 27.69 | 25.57 |
| Ag.Serv., For., Fish., and other      | ERR   | ERR   | ERR   | ERR   |
| Mining                                | 18.90 | ERR   | ERR   | 9.58  |
| Construction                          | 26.33 | 24.52 | 16.47 | 15.58 |
| Manufacturing                         | 18.30 | 16.99 | 14.40 | 11.39 |
| Transportation and Public Utilities   | 48.35 | 44.54 | 38.78 | 41.27 |
| Wholesale Trade                       | 46.30 | 40.48 | 29.54 | 24.37 |
| Retail Trade                          | 29.35 | 26.36 | 20.38 | 19.83 |
| Finance, Insurance and Real Estate    | 62.61 | 58.27 | 50.04 | 49.77 |
| Services                              | 35.50 | 35.61 | 35.72 | 31.80 |
| Government and Government Enterprises | 37.79 | 36.04 | 32.34 | 34.30 |
| Federal, Civilian                     | 57.19 | 54.31 | 51.68 | 46.36 |
| Military                              | 37.06 | 31.79 | 17.75 | 17.45 |
| State and Local                       | 31.61 | 31.79 | 30.16 | 34.10 |



Table 22E. Ratio of Employment in Cook County to Chicago Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 93.83 | 92.53 | 90.16 | 87.13 |
| Farm                                  | 33.61 | 32.00 | 33.29 | 33.07 |
| Non-farm                              | 93.94 | 92.64 | 90.24 | 87.20 |
| Private                               | 94.04 | 92.67 | 90.11 | 86.85 |
| Ag.Serv., For., Fish., and Other      | 80.08 | ERR   | ERR   | 68.67 |
| Mining                                | 91.50 | 93.17 | 94.72 | 85.79 |
| Construction                          | 89.40 | 86.49 | 82.45 | 81.57 |
| Manufacturing                         | 95.16 | 94.22 | 91.90 | 88.63 |
| Transportation and Public Utilities   | 96.21 | 95.14 | 92.98 | 88.66 |
| Wholesale Trade                       | 95.08 | 93.68 | 91.06 | 87.46 |
| Retail Trade                          | 91.85 | 90.46 | 88.25 | 84.93 |
| Finance, Insurance and Real Estate    | 95.34 | 93.18 | 90.83 | 90.04 |
| Services                              | 93.70 | 92.36 | 89.70 | 86.07 |
| Government and Government Enterprises | 93.17 | 92.40 | 91.13 | 89.87 |
| Federal, Civilian                     | 97.87 | 97.52 | 96.78 | 95.48 |
| Military                              | 91.59 | 90.76 | 87.79 | 86.49 |
| State and Local                       | 92.14 | 91.41 | 90.21 | 88.98 |

Table 22F. Ratio of Employment in Hamilton County to Cincinnati Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 81.53 | 79.89 | 77.77 | 75.67 |
| Farm                                  | 8.82  | 10.14 | 13.48 | 12.96 |
| Non-farm                              | 82.61 | 80.88 | 78.55 | 76.34 |
| Private                               | 83.88 | 82.17 | 79.53 | 77.24 |
| Ag.Serv., For., Fish., and Other      | 75.16 | ERR   | ERR   | 59.43 |
| Mining                                | 75.63 | 78.51 | ERR   | 81.31 |
| Construction                          | 77.75 | 75.60 | 67.36 | 69.99 |
| Manufacturing                         | 89.62 | 87.01 | 86.42 | 83.21 |
| Transportation and Public Utilities   | 82.69 | 81.48 | 78.25 | 78.59 |
| Wholesale Trade                       | 90.37 | 88.48 | 86.73 | 85.92 |
| Retail Trade                          | 75.99 | 75.96 | 72.01 | 69.57 |
| Finance, Insurance and Real Estate    | 85.72 | 84.50 | 80.54 | 80.92 |
| Services                              | 81.16 | 80.27 | 78.57 | 76.78 |
| Government and Government Enterprises | 73.80 | 72.17 | 71.88 | 69.84 |
| Federal, Civilian                     | 76.20 | 72.88 | 72.02 | 71.21 |
| Military                              | 67.72 | 65.47 | 62.76 | 51.92 |
| State and Local                       | 73.85 | 72.72 | 72.44 | 70.90 |

Table 22G. Ratio of Employment in Cuyahoga County to Cleveland Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 89.92 | 88.63 | 86.37 | 84.37 |
| Farm                                  | 20.64 | 20.42 | 21.54 | 20.75 |
| Non-farm                              | 90.25 | 88.97 | 86.67 | 84.64 |
| Private                               | 90.59 | 89.25 | 86.92 | 84.63 |
| Ag.Serv., For., Fish., and Other      | 73.45 | 74.21 | 65.94 | 66.74 |
| Mining                                | 68.28 | 61.44 | 61.22 | 62.62 |
| Construction                          | 87.54 | 84.05 | 80.16 | 70.95 |
| Manufacturing                         | 89.69 | 87.33 | 85.43 | 81.71 |
| Transportation and Public Utilities   | 95.06 | 94.42 | 93.09 | 90.66 |
| Wholesale Trade                       | 96.63 | 95.87 | 91.69 | 90.89 |
| Retail Trade                          | 88.73 | 87.03 | 84.16 | 82.11 |
| Finance, Insurance and Real Estate    | 92.16 | 91.20 | 87.18 | 88.11 |
| Services                              | 91.09 | 91.06 | 89.81 | 88.11 |
| Government and Government Enterprises | 87.67 | 86.99 | 84.85 | 83.06 |
| Federal, Civilian                     | 96.68 | 96.58 | 96.59 | 96.38 |
| Military                              | 84.39 | 82.97 | 82.20 | 82.54 |
| State and Local                       | 85.66 | 85.13 | 82.55 | 82.54 |

Table 22H. Ratio of Employment in Franklin County to Columbus Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 76.42 | 77.40 | 77.23 | 78.42 |
| Farm                                  | 11.42 | 11.37 | 10.68 | 10.53 |
| Non-farm                              | 78.20 | 79.01 | 78.65 | 79.62 |
| Private                               | 78.46 | 79.16 | 78.48 | 79.52 |
| Ag.Serv., For., Fish., and Other      | 56.45 | ERR   | ERR   | 77.16 |
| Mining                                | 48.54 | ERR   | ERR   | 49.09 |
| Construction                          | 80.59 | 81.32 | 75.43 | 76.03 |
| Manufacturing                         | 71.17 | 68.76 | 65.97 | 65.10 |
| Transportation and Public Utilities   | 81.16 | 81.69 | 81.04 | 83.13 |
| Wholesale Trade                       | 88.77 | 91.39 | 88.87 | 90.53 |
| Retail Trade                          | 79.28 | 80.53 | 80.58 | 80.92 |
| Finance, Insurance and Real Estate    | 88.17 | 87.54 | 86.11 | 87.00 |
| Services                              | 80.92 | 82.60 | 83.36 | 83.25 |
| Government and Government Enterprises | 77.06 | 78.40 | 79.45 | 80.14 |
| Federal, Civilian                     | 75.55 | 75.93 | 75.79 | 74.87 |
| Military                              | 86.76 | 82.59 | 82.95 | 75.35 |
| State and Local                       | 75.68 | 78.44 | 79.81 | 81.17 |



Table 22I. Ratio of Employment in Dallas County to Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 90.54 | 90.00 | 89.21 | 88.04 |
| Farm                                  | 15.46 | 14.01 | 14.10 | 13.76 |
| Non-farm                              | 91.71 | 90.99 | 89.90 | 88.51 |
| Private                               | 92.83 | 92.16 | 91.05 | 89.44 |
| Ag.Serv., For., Fish., and Other      | 77.37 | ERR   | ERR   | 79.24 |
| Mining                                | 98.00 | 97.91 | 98.85 | 93.32 |
| Construction                          | 91.84 | 90.26 | 87.63 | 85.49 |
| Manufacturing                         | 92.51 | 90.98 | 89.38 | 86.29 |
| Transportation and Public Utilities   | 95.34 | 94.83 | 93.43 | 93.62 |
| Wholesale Trade                       | 97.40 | 97.11 | 96.49 | 94.55 |
| Retail Trade                          | 90.37 | 90.19 | 88.79 | 86.13 |
| Finance, Insurance and Real Estate    | 93.81 | 94.28 | 93.55 | 92.63 |
| Services                              | 92.05 | 91.47 | 91.03 | 90.64 |
| Government and Government Enterprises | 82.39 | 82.46 | 81.55 | 79.82 |
| Federal, Civilian                     | 94.34 | 95.09 | 95.83 | 94.95 |
| Military                              | 87.10 | 86.78 | 84.70 | 82.41 |
| State and Local                       | 79.04 | 79.29 | 78.31 | 76.25 |

Table 22J. Ratio of Employment in Denver County to Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 70.96 | 65.66 | 56.56 | 51.10 |
| Farm                                  | 5.58  | 4.73  | 6.04  | 5.90  |
| Non-farm                              | 71.59 | 66.08 | 56.85 | 51.30 |
| Private                               | 73.33 | 67.55 | 57.00 | 51.01 |
| Ag.Serv., For., Fish., and Other      | 62.06 | ERR   | ERR   | 30.67 |
| Mining                                | 88.82 | ERR   | 67.25 | 61.36 |
| Construction                          | 56.25 | 44.37 | 37.52 | 36.88 |
| Manufacturing                         | 68.55 | 62.61 | 53.39 | 39.69 |
| Transportation and Public Utilities   | 91.65 | 90.78 | 86.97 | 68.85 |
| Wholesale Trade                       | 89.33 | 83.11 | ERR   | 64.85 |
| Retail Trade                          | 65.98 | 63.38 | 46.24 | 39.14 |
| Finance, Insurance and Real Estate    | 75.48 | 71.56 | 65.74 | 52.92 |
| Services                              | 74.30 | 69.15 | ERR   | 57.27 |
| Government and Government Enterprises | 64.32 | 59.30 | 56.13 | 53.07 |
| Federal, Civilian                     | 70.16 | 55.78 | 51.82 | 51.76 |
| Military                              | 69.30 | 66.56 | 75.04 | 65.37 |
| State and Local                       | 59.93 | 58.71 | 54.10 | 51.07 |

Table 22K. Ratio of Employment in Wayne County to Detroit Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 66.23 | 64.23 | 57.26 | 51.95 |
| Farm                                  | 7.35  | 7.50  | 7.10  | 7.22  |
| Non-farm                              | 66.69 | 64.67 | 57.56 | 52.23 |
| Private                               | 67.34 | 65.25 | 57.43 | 51.47 |
| Ag.Serv., For., Fish., and Other      | 43.38 | 41.55 | ERR   | 29.77 |
| Mining                                | ERR   | ERR   | ERR   | 28.36 |
| Construction                          | 54.15 | 50.61 | 41.32 | 42.23 |
| Manufacturing                         | 65.25 | 64.54 | 61.88 | 55.14 |
| Transportation and Public Utilities   | 77.09 | 75.09 | 69.46 | 64.90 |
| Wholesale Trade                       | 77.09 | 74.53 | 57.86 | 53.42 |
| Retail Trade                          | 64.74 | 61.50 | 50.46 | 44.78 |
| Finance, Insurance and Real Estate    | 75.35 | 69.43 | 53.69 | 48.99 |
| Services                              | 69.59 | 66.91 | 58.35 | 52.70 |
| Government and Government Enterprises | 62.26 | 60.81 | 58.44 | 57.59 |
| Federal, Civilian                     | 60.82 | 57.95 | 59.08 | 55.58 |
| Military                              | 53.85 | 56.14 | 52.16 | 49.35 |
| State and Local                       | 63.71 | 61.82 | 58.70 | 58.42 |

Table 22M. Ratio of Employment in Tarrant County to Fort Worth Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 91.73 | 92.36 | 92.31 | 92.58 |
| Farm                                  | 35.03 | 31.35 | 26.10 | 26.02 |
| Non-farm                              | 92.82 | 93.43 | 93.14 | 93.20 |
| Private                               | 94.53 | 93.85 | 93.24 | 93.30 |
| Ag.Serv., For., Fish., and Other      | 82.54 | 83.88 | ERR   | ERR   |
| Mining                                | 97.20 | 93.81 | 94.63 | 95.94 |
| Construction                          | 92.37 | 91.93 | 90.40 | 91.90 |
| Manufacturing                         | 96.73 | 95.71 | 93.84 | 93.59 |
| Transportation and Public Utilities   | 87.58 | 86.27 | 90.31 | 90.90 |
| Wholesale Trade                       | 97.42 | 96.94 | 96.12 | 95.59 |
| Retail Trade                          | 92.93 | 93.37 | 93.09 | 93.08 |
| Finance, Insurance and Real Estate    | 95.14 | 94.32 | 93.48 | 93.91 |
| Services                              | 94.14 | 94.04 | 94.02 | 93.92 |
| Government and Government Enterprises | 83.10 | 91.15 | 92.50 | 92.44 |
| Federal, Civilian                     | 97.77 | 97.89 | 97.61 | 97.63 |
| Military                              | 55.42 | 84.45 | 95.74 | 94.95 |
| State and Local                       | 91.12 | 90.72 | 90.65 | 90.58 |



Table 22N. Ratio of Employment in Harris County to Houston Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 94.81 | 94.54 | 93.75 | 92.93 |
| Farm                                  | 33.89 | 32.15 | 32.44 | 32.49 |
| Non-farm                              | 95.51 | 95.12 | 94.10 | 93.19 |
| Private                               | 96.02 | 95.71 | 94.61 | 93.77 |
| Ag.Serv., For., Fish., and Other      | 86.79 | 90.42 | ERR   | 85.64 |
| Mining                                | 91.29 | 95.57 | 95.42 | 92.67 |
| Construction                          | 96.09 | 95.25 | 93.83 | 92.92 |
| Manufacturing                         | 96.31 | 95.56 | 92.69 | 92.13 |
| Transportation and Public Utilities   | 97.73 | 97.40 | 96.64 | 96.19 |
| Wholesale Trade                       | 98.63 | 98.38 | 97.68 | 96.60 |
| Retail Trade                          | 94.58 | 94.46 | 93.92 | 92.89 |
| Finance, Insurance and Real Estate    | 96.55 | 95.86 | 95.75 | 94.13 |
| Services                              | 95.99 | 95.84 | 95.25 | 94.26 |
| Government and Government Enterprises | 91.70 | 90.87 | 89.85 | 88.43 |
| Federal, Civilian                     | 97.37 | 97.33 | 97.27 | 96.22 |
| Military                              | 92.63 | 92.19 | 89.44 | 87.72 |
| State and Local                       | 90.17 | 89.40 | 88.77 | 87.33 |

Table 220. Ratio of Employment in Marion County to Indianapolis Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 84.42 | 82.56 | 79.95 | 78.24 |
| Farm                                  | 8.87  | 9.24  | 8.16  | 8.12  |
| Non-farm                              | 86.22 | 84.21 | 81.33 | 79.40 |
| Private                               | 86.80 | 84.61 | 81.34 | 79.29 |
| Ag.Serv., For., Fish., and Other      | ERR   | ERR   | ERR   | 64.92 |
| Mining                                | ERR   | 71.44 | ERR   | 83.45 |
| Construction                          | 85.99 | 82.02 | 71.55 | 70.98 |
| Manufacturing                         | 88.47 | 87.11 | 84.19 | 80.71 |
| Transportation and Public Utilities   | 88.17 | 84.10 | 78.83 | 84.27 |
| Wholesale Trade                       | 94.05 | 92.63 | 86.96 | 85.97 |
| Retail Trade                          | 80.76 | 79.09 | 77.17 | 75.20 |
| Finance, Insurance and Real Estate    | 93.23 | 91.71 | 83.69 | 81.51 |
| Services                              | 89.44 | 87.50 | 83.00 | 81.58 |
| Government and Government Enterprises | 83.06 | 82.11 | 81.29 | 79.98 |
| Federal, Civilian                     | 95.67 | 95.05 | 94.90 | 94.64 |
| Military                              | 83.03 | 80.34 | 80.31 | 78.65 |
| State and Local                       | 78.85 | 78.71 | 78.02 | 76.45 |

Table 22P. Ratio of Employment in Duval County to Jacksonville Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 90.12 | 89.69 | 87.76 | 85.79 |
| Farm                                  | 34.21 | 36.22 | 33.18 | 33.20 |
| Non-farm                              | 90.71 | 90.19 | 88.15 | 86.10 |
| Private                               | 90.43 | 90.31 | 87.27 | 85.17 |
| Ag.Serv., For., Fish., and Other      | ERR   | ERR   | ERR   | ERR   |
| Mining                                | ERR   | ERR   | ERR   | 31.28 |
| Construction                          | 90.36 | 91.45 | 89.47 | 85.21 |
| Manufacturing                         | ERR   | 86.19 | 83.73 | 83.30 |
| Transportation and Public Utilities   | 97.44 | 94.71 | 94.93 | 93.15 |
| Wholesale Trade                       | 96.22 | 97.91 | 97.18 | 91.43 |
| Retail Trade                          | 92.31 | 89.57 | 83.96 | 80.79 |
| Finance, Insurance and Real Estate    | 96.45 | 94.24 | 91.35 | 90.37 |
| Services                              | 89.31 | 88.96 | 86.33 | 84.32 |
| Government and Government Enterprises | 91.60 | 89.75 | 90.84 | 89.72 |
| Federal, Civilian                     | 91.98 | 90.72 | 91.59 | 92.82 |
| Military                              | 98.50 | 98.05 | 99.09 | 98.70 |
| State and Local                       | 83.68 | 82.83 | 82.69 | 79.98 |

Table 22Q. Ratio of Employment in Clay, Jackson and Platte Counties to Kansas City Metropolitan Employment: 1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 68.23 | 65.99 | 62.95 | 60.21 |
| Farm                                  | 30.55 | 28.62 | 26.15 | 25.53 |
| Non-farm                              | 69.27 | 66.94 | 63.66 | 60.80 |
| Private                               | 72.11 | 69.52 | 65.15 | 61.76 |
| Ag.Serv., For., Fish., and Other      | ERR   | ERR   | 51.76 | ERR   |
| Mining                                | ERR   | ERR   | 41.75 | 0.00  |
| Construction                          | 64.50 | 63.45 | 57.70 | 55.40 |
| Manufacturing                         | 72.32 | 69.59 | 66.76 | 64.64 |
| Transportation and Public Utilities   | 76.16 | 74.13 | 70.65 | 65.62 |
| Wholesale Trade                       | 78.84 | 73.13 | 65.25 | 56.79 |
| Retail Trade                          | 67.66 | 65.97 | 62.55 | 60.25 |
| Finance, Insurance and Real Estate    | 75.90 | 71.76 | 64.41 | 58.88 |
| Services                              | 72.45 | 70.67 | 66.47 | 64.27 |
| Government and Government Enterprises | 54.43 | 54.10 | 55.51 | 55.40 |
| Federal, Civilian                     | 67.46 | 65.81 | 69.20 | 71.47 |
| Military                              | 35.44 | 34.93 | 32.53 | 40.91 |
| State and Local                       | 53.00 | 53.51 | 53.80 | 52.22 |



Table 22S. Ratio of Employment in Shelby County to Memphis Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 91.13 | 90.97 | 90.97 | 90.65 |
| Farm                                  | 27.68 | 27.82 | 28.93 | 30.68 |
| Non-farm                              | 92.84 | 92.39 | 92.04 | 91.57 |
| Private                               | 92.63 | 92.21 | 91.91 | 91.28 |
| Ag.Serv., For., Fish., and Other      | ERR   | ERR   | ERR   | 84.81 |
| Mining                                | ERR   | ERR   | ERR   | 93.83 |
| Construction                          | 91.36 | 91.41 | 87.91 | 88.37 |
| Manufacturing                         | 91.81 | 90.26 | 90.68 | 85.70 |
| Transportation and Public Utilities   | 94.63 | 93.91 | 95.51 | 95.41 |
| Wholesale Trade                       | 97.82 | 97.57 | 97.60 | 94.22 |
| Retail Trade                          | 90.53 | 90.95 | 91.36 | 90.66 |
| Finance, Insurance and Real Estate    | 98.52 | 98.79 | 98.51 | 96.04 |
| Services                              | 98.38 | 98.13 | 92.01 | 92.60 |
| Government and Government Enterprises | 93.69 | 93.11 | 92.57 | 93.00 |
| Federal, Civilian                     | 97.95 | 98.35 | 98.24 | 98.19 |
| Military                              | 95.70 | 94.92 | 94.63 | 95.17 |
| State and Local                       | 91.13 | 90.53 | 90.02 | 90.49 |

Table 22T. Ratio of Employment in Milwaukee County to Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 81.45 | 79.76 | 75.83 | 72.43 |
| Farm                                  | 13.46 | 12.08 | 7.25  | 7.42  |
| Non-farm                              | 82.11 | 80.37 | 76.30 | 72.85 |
| Private                               | 82.29 | 80.61 | 76.41 | 72.72 |
| Ag.Serv., For., Fish., and Other      | ERR   | 55.12 | 45.98 | 40.86 |
| Mining                                | ERR   | 44.37 | 45.31 | 47.51 |
| Construction                          | 68.59 | 66.27 | 59.23 | 61.11 |
| Manufacturing                         | 81.77 | 79.52 | 75.07 | 69.67 |
| Transportation and Public Utilities   | 88.31 | 86.75 | 80.57 | 75.39 |
| Wholesale Trade                       | 86.72 | 81.84 | 75.12 | 69.10 |
| Retail Trade                          | 81.11 | 80.86 | 76.07 | 70.97 |
| Finance, Insurance and Real Estate    | 88.96 | 86.84 | 79.39 | 76.31 |
| Services                              | 83.32 | 81.54 | 80.49 | 78.19 |
| Government and Government Enterprises | 80.72 | 78.62 | 75.41 | 73.81 |
| Federal, Civilian                     | 91.85 | 92.73 | 92.33 | 85.49 |
| Military                              | 78.51 | 76.09 | 73.17 | 70.54 |
| State and Local                       | 78.79 | 76.35 | 72.79 | 72.45 |

Table 22U. Ratio of Employment in Hennepin and Ramsey Counties to Minneapolis -St.Paul  
Metropolitan Employment: 1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 85.07 | 82.90 | 79.52 | 78.25 |
| Farm                                  | 12.38 | 12.23 | 11.11 | 10.61 |
| Non-farm                              | 86.54 | 84.24 | 80.64 | 79.12 |
| Private                               | 87.78 | 85.38 | 81.54 | 79.71 |
| Ag.Serv., For., Fish., and Other      | 64.47 | 63.89 | ERR   | ERR   |
| Mining                                | 61.13 | 58.42 | ERR   | ERR   |
| Construction                          | 82.91 | 77.39 | 72.03 | 69.78 |
| Manufacturing                         | 85.55 | 83.99 | 80.57 | 78.84 |
| Transportation and Public Utilities   | 90.13 | 89.19 | 84.43 | 82.09 |
| Wholesale Trade                       | 94.55 | 92.15 | ERR   | ERR   |
| Retail Trade                          | 85.58 | 81.68 | 76.69 | 74.08 |
| Finance, Insurance and Real Estate    | 93.23 | 89.56 | 86.90 | 84.29 |
| Services                              | 89.29 | 87.24 | ERR   | 83.11 |
| Government and Government Enterprises | 79.08 | 77.87 | 75.05 | 74.78 |
| Federal, Civilian                     | 92.40 | 91.33 | 89.20 | 88.02 |
| Military                              | 76.20 | 71.73 | 68.87 | 66.90 |
| State and Local                       | 76.65 | 76.20 | 73.36 | 73.41 |

Table 22V. Ratio of Employment in Davidson County to Nashville Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 73.54 | 72.33 | 71.30 | 70.46 |
| Farm                                  | 9.19  | 8.21  | 6.45  | 6.46  |
| Non-farm                              | 77.19 | 75.69 | 73.84 | 72.57 |
| Private                               | 78.74 | 75.89 | 74.32 | 73.01 |
| Ag.Serv., For., Fish., and Other      | ERR   | ERR   | ERR   | ERR   |
| Mining                                | 75.00 | ERR   | ERR   | ERR   |
| Construction                          | 76.92 | 73.48 | 71.40 | 65.91 |
| Manufacturing                         | 70.01 | 64.00 | 58.97 | 55.18 |
| Transportation and Public Utilities   | 86.91 | 87.17 | 85.76 | 83.09 |
| Wholesale Trade                       | 89.78 | 89.51 | 89.91 | 86.86 |
| Retail Trade                          | 75.27 | 74.48 | 75.01 | 76.25 |
| Finance, Insurance and Real Estate    | 90.20 | 85.88 | 79.89 | 76.62 |
| Services                              | 82.65 | 80.32 | 80.11 | 79.65 |
| Government and Government Enterprises | 69.58 | 74.65 | 71.20 | 69.58 |
| Federal, Civilian                     | 69.16 | 74.61 | 70.96 | 72.14 |
| Military                              | 41.71 | 65.19 | 60.63 | 59.71 |
| State and Local                       | 76.89 | 75.83 | 72.16 | 69.91 |



Table 22W. Ratio of Employment in Orleans County to New Orleans Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 70.54 | 67.61 | 61.14 | 54.80 |
| Farm                                  | 0.00  | 0.00  | 0.00  | 0.00  |
| Non-farm                              | 70.83 | 67.86 | 61.30 | 54.91 |
| Private                               | 70.70 | 67.67 | 60.81 | 53.81 |
| Ag.Serv., For., Fish., and Other      | 44.81 | 41.74 | 27.13 | 26.52 |
| Mining                                | 55.28 | 60.68 | 72.49 | 71.10 |
| Construction                          | 60.50 | 55.11 | 42.91 | 33.18 |
| Manufacturing                         | 53.18 | 49.10 | 45.13 | 44.77 |
| Transportation and Public Utilities   | 78.45 | 74.17 | 68.35 | 60.59 |
| Wholesale Trade                       | 75.01 | 73.68 | 64.65 | 48.47 |
| Retail Trade                          | 66.40 | 62.92 | 55.13 | 43.04 |
| Finance, Insurance and Real Estate    | 84.96 | 79.39 | 69.84 | 57.41 |
| Services                              | 80.43 | 77.31 | 70.68 | 64.38 |
| Government and Government Enterprises | 71.55 | 68.83 | 63.94 | 60.93 |
| Federal, Civilian                     | 92.37 | 91.71 | 91.20 | 85.35 |
| Military                              | 59.59 | 59.05 | 67.75 | 63.04 |
| State and Local                       | 68.00 | 65.00 | 57.00 | 55.87 |

Table 22X. Ratio of Employment in Five Central Counties to New York Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 90.29 | 89.37 | 87.61 | 86.63 |
| Farm                                  | 5.76  | 5.26  | 0.00  | 0.00  |
| Non-farm                              | 90.31 | 89.39 | 87.63 | 86.65 |
| Private                               | 90.43 | 89.39 | 87.67 | 86.48 |
| Ag.Serv., For., Fish., and Other      | 56.56 | 0.00  | ERR   | ERR   |
| Mining                                | 80.59 | 79.53 | 0.00  | ERR   |
| Construction                          | ERR   | ERR   | ERR   | 77.75 |
| Manufacturing                         | 89.59 | 88.99 | 85.83 | 83.25 |
| Transportation and Public Utilities   | 0.00  | 0.00  | 91.95 | 90.40 |
| Wholesale Trade                       | 93.58 | 0.00  | 89.68 | 87.51 |
| Retail Trade                          | 87.53 | 86.04 | 83.59 | 81.99 |
| Finance, Insurance and Real Estate    | 95.42 | 94.34 | 93.41 | 92.89 |
| Services                              | 89.86 | 88.62 | 87.37 | 86.86 |
| Government and Government Enterprises | 89.53 | 89.38 | 87.42 | 87.67 |
| Federal, Civilian                     | 94.18 | 93.70 | 92.27 | 91.54 |
| Military                              | 88.93 | 87.95 | 88.45 | 88.46 |
| State and Local                       | 88.51 | 88.65 | 86.44 | 87.01 |

Table 22Y. Ratio of Employment in Oklahoma County to Oklahoma City Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 83.27 | 81.82 | 80.32 | 79.45 |
| Farm                                  | 17.22 | 16.86 | 15.35 | 15.31 |
| Non-farm                              | 85.19 | 83.47 | 81.55 | 80.43 |
| Private                               | 85.17 | 83.79 | 82.84 | 81.62 |
| Ag.Serv., For., Fish., and Other      | 64.50 | ERR   | ERR   | 68.44 |
| Mining                                | 89.20 | 94.32 | 93.74 | 82.69 |
| Construction                          | 79.36 | 78.07 | 76.90 | 72.63 |
| Manufacturing                         | 89.57 | 85.40 | 83.76 | 84.19 |
| Transportation and Public Utilities   | 87.15 | 90.15 | 86.04 | 87.49 |
| Wholesale Trade                       | 94.37 | 93.51 | 91.13 | 89.19 |
| Retail Trade                          | 80.94 | 79.28 | 78.66 | 76.28 |
| Finance, Insurance and Real Estate    | 90.02 | 87.80 | 86.26 | 83.53 |
| Services                              | 82.57 | 83.19 | 82.69 | 83.15 |
| Government and Government Enterprises | 85.24 | 82.54 | 77.00 | 75.93 |
| Federal, Civilian                     | 97.05 | 96.57 | 95.41 | 94.97 |
| Military                              | 83.34 | 83.44 | 80.88 | 81.16 |
| State and Local                       | 74.79 | 71.84 | 67.61 | 66.84 |

Table 222. Ratio of Employment in Philadelphia County to Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 49.64 | 46.77 | 40.39 | 36.08 |
| Farm                                  | 0.17  | 0.22  | 0.14  | 0.15  |
| Non-farm                              | 49.97 | 47.10 | 40.69 | 36.32 |
| Private                               | 50.41 | 46.83 | 39.62 | 34.49 |
| Ag.Serv., For., Fish., and Other      | 12.44 | ERR   | ERR   | 7.43  |
| Mining                                | 5.58  | ERR   | ERR   | 12.96 |
| Construction                          | 39.95 | 35.01 | 23.62 | 20.74 |
| Manufacturing                         | 44.56 | 42.10 | 33.17 | 27.16 |
| Transportation and Public Utilities   | 62.95 | 59.44 | 54.77 | 46.81 |
| Wholesale Trade                       | 61.75 | 54.63 | 42.64 | 34.35 |
| Retail Trade                          | 46.31 | 40.86 | 33.61 | 29.93 |
| Finance, Insurance and Real Estate    | 64.36 | 57.91 | 48.69 | 42.04 |
| Services                              | 54.64 | 51.65 | 46.40 | 40.52 |
| Government and Government Enterprises | 47.73 | 48.45 | 46.50 | 47.14 |
| Federal, Civilian                     | 75.61 | 74.40 | 71.19 | 71.36 |
| Military                              | 22.57 | 24.29 | 30.92 | 34.35 |
| State and Local                       | 44.67 | 44.82 | 41.21 | 41.35 |



Table 22AB. Ratio of Employment in Allegheny County to Pittsburgh Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 75.57 | 74.50 | 73.72 | 74.20 |
| Farm                                  | 14.96 | 14.15 | 14.90 | 15.09 |
| Non-farm                              | 76.00 | 74.91 | 74.08 | 74.56 |
| Private                               | 76.39 | 75.20 | 74.49 | 74.96 |
| Ag.Serv., For., Fish., and Other      | 64.91 | 64.78 | ERR   | 68.55 |
| Mining                                | 32.41 | 30.25 | ERR   | 38.71 |
| Construction                          | 75.25 | 72.94 | 73.18 | 73.93 |
| Manufacturing                         | 72.54 | 71.89 | 70.69 | 68.19 |
| Transportation and Public Utilities   | 77.27 | 76.25 | 74.13 | 70.81 |
| Wholesale Trade                       | 85.75 | 84.36 | 80.49 | 78.18 |
| Retail Trade                          | 74.10 | 72.96 | 72.40 | 72.83 |
| Finance, Insurance and Real Estate    | 84.40 | 84.13 | ERR   | 82.95 |
| Services                              | 81.30 | 79.01 | 78.66 | 79.47 |
| Government and Government Enterprises | 73.32 | 73.07 | 71.19 | 71.64 |
| Federal, Civilian                     | 88.13 | 88.20 | 87.72 | 87.27 |
| Military                              | 69.41 | 70.33 | 67.54 | 66.98 |
| State and Local                       | 71.14 | 70.85 | 68.52 | 69.21 |

Table 22AC. Ratio of Employment in Bexar County to San Antonio Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 94.67 | 94.39 | 93.38 | 93.48 |
| Farm                                  | 53.47 | 51.54 | 52.10 | 50.78 |
| Non-farm                              | 95.34 | 95.00 | 93.89 | 93.88 |
| Private                               | 93.36 | 93.37 | 92.57 | 92.94 |
| Ag.Serv., For., Fish., and Other      | 89.39 | ERR   | 88.45 | 95.73 |
| Mining                                | 83.92 | ERR   | 86.84 | 92.24 |
| Construction                          | 93.85 | 94.22 | 92.70 | 92.56 |
| Manufacturing                         | 89.83 | 89.00 | 85.14 | 84.66 |
| Transportation and Public Utilities   | 93.63 | 94.37 | 95.07 | 95.32 |
| Wholesale Trade                       | 96.82 | 96.46 | 95.98 | 96.26 |
| Retail Trade                          | 93.24 | 93.31 | 93.29 | 93.88 |
| Finance, Insurance and Real Estate    | 96.08 | 95.88 | 95.04 | 94.56 |
| Services                              | 93.84 | 93.86 | 93.78 | 94.26 |
| Government and Government Enterprises | 98.48 | 97.99 | 97.14 | 96.77 |
| Federal, Civilian                     | 99.72 | 99.70 | 99.47 | 99.34 |
| Military                              | 99.59 | 99.52 | 99.38 | 99.23 |
| State and Local                       | 94.87 | 94.38 | 94.02 | 93.44 |

Table 22AE. Ratio of Employment in San Francisco County to Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 66.41 | 64.25 | 61.14 | 59.09 |
| Farm                                  | 1.76  | 1.81  | 0.00  | 0.00  |
| Non-farm                              | 66.62 | 64.46 | 61.33 | 59.24 |
| Private                               | 65.87 | 63.81 | 60.28 | 57.95 |
| Ag.Serv., For., Fish., and Other      | 38.00 | ERR   | 25.04 | ERR   |
| Mining                                | 70.18 | ERR   | 79.08 | ERR   |
| Construction                          | 56.67 | 55.09 | 53.24 | 41.30 |
| Manufacturing                         | 59.09 | 59.43 | 55.88 | 53.57 |
| Transportation and Public Utilities   | 64.54 | 63.57 | 58.84 | 58.46 |
| Wholesale Trade                       | 71.78 | 68.22 | 59.89 | 54.39 |
| Retail Trade                          | 58.51 | 54.92 | 50.98 | 50.69 |
| Finance, Insurance and Real Estate    | 79.40 | 76.10 | 71.82 | 66.44 |
| Services                              | 68.57 | 66.02 | 63.66 | 61.96 |
| Government and Government Enterprises | 69.91 | 67.37 | 67.14 | 67.95 |
| Federal, Civilian                     | 84.88 | 81.44 | 83.43 | 82.72 |
| Military                              | 72.29 | 71.38 | 80.33 | 74.38 |
| State and Local                       | 59.55 | 59.36 | 58.96 | 61.59 |

Table 22A.G. Ratio of Employment in King County to Seattle Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 85.91 | 87.21 | 86.57 | 85.95 |
| Farm                                  | 50.26 | 50.93 | 50.36 | 50.36 |
| Non-farm                              | 86.18 | 87.47 | 86.82 | 86.17 |
| Private                               | 85.92 | 87.58 | 86.84 | 86.28 |
| Ag.Serv., For., Fish., and Other      | 75.61 | 77.33 | 78.24 | 72.15 |
| Mining                                | 68.62 | 66.13 | 72.02 | 77.79 |
| Construction                          | 84.97 | 84.41 | 81.59 | 81.62 |
| Manufacturing                         | 77.91 | 82.72 | 82.82 | 82.66 |
| Transportation and Public Utilities   | 90.49 | 89.93 | 89.72 | 89.35 |
| Wholesale Trade                       | 95.37 | 94.91 | 93.67 | 93.56 |
| Retail Trade                          | 86.87 | 86.28 | 85.86 | 83.90 |
| Finance, Insurance and Real Estate    | 91.29 | 92.18 | 90.50 | 90.27 |
| Services                              | 89.98 | 89.09 | 88.55 | 88.02 |
| Government and Government Enterprises | 87.52 | 87.01 | 86.71 | 85.43 |
| Federal, Civilian                     | 94.91 | 95.14 | 95.15 | 95.25 |
| Military                              | 86.82 | 85.53 | 85.38 | 82.70 |
| State and Local                       | 86.08 | 85.67 | 85.13 | 83.85 |



Table 22AH. Ratio of Employment in St. Louis City to Metropolitan Employment:  
1969, 1972, 1978 and 1984

|                                       | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Total Employment                      | 43.52 | 41.66 | 36.27 | 29.56 |
| Farm                                  | 0.00  | 0.00  | 0.00  | 0.00  |
| Non-farm                              | 44.18 | 42.27 | 36.76 | 29.89 |
| Private                               | 44.70 | 42.87 | 36.92 | 29.32 |
| Ag.Serv., For., Fish., and Other      | ERR   | 14.00 | 11.66 | 13.67 |
| Mining                                | ERR   | 18.48 | 18.22 | 11.61 |
| Construction                          | 25.68 | 25.44 | 20.68 | 19.65 |
| Manufacturing                         | 42.89 | 42.79 | 37.09 | 28.48 |
| Transportation and Public Utilities   | 53.37 | 52.94 | 45.19 | 39.86 |
| Wholesale Trade                       | 58.90 | 54.15 | 45.72 | 36.15 |
| Retail Trade                          | 33.82 | 31.07 | 24.77 | 19.99 |
| Finance, Insurance and Real Estate    | 50.78 | 49.19 | 41.24 | 33.35 |
| Services                              | 51.90 | 47.65 | 43.43 | 33.10 |
| Government and Government Enterprises | 41.02 | 38.71 | 35.75 | 33.75 |
| Federal, Civilian                     | 67.09 | 66.73 | 66.24 | 60.92 |
| Military                              | 24.26 | 23.84 | 20.92 | 20.25 |
| State and Local                       | 32.60 | 31.12 | 27.76 | 26.52 |

Table 22A1. Ratio of Employment in the District of Columbia to Washington Metropolitan Employment:  
1969, 1972, 1978 and 1984

| Total Employment                      | 1969  | 1972  | 1978  | 1984  |
|---------------------------------------|-------|-------|-------|-------|
| Farm                                  | 0.00  | 0.00  | 0.00  | 0.00  |
| Non-farm                              | 45.25 | 41.55 | 37.32 | 32.04 |
| Private                               | 42.36 | 36.89 | 31.29 | 26.74 |
| Ag.Serv., For., Fish., and other      | ERR   | 41.36 | ERR   | 31.90 |
| Mining                                | ERR   | ERR   | 26.31 | ERR   |
| Construction                          | 24.63 | 22.25 | ERR   | 11.05 |
| Manufacturing                         | 38.11 | 32.63 | 25.47 | 18.76 |
| Transportation and Public Utilities   | 55.72 | 46.05 | 38.98 | 29.18 |
| Wholesale Trade                       | 50.35 | 36.38 | ERR   | 13.79 |
| Retail Trade                          | 32.29 | 26.59 | 20.07 | 17.43 |
| Finance, Insurance and Real Estate    | 42.36 | 35.27 | 31.78 | 26.92 |
| Services                              | 51.31 | 47.04 | 41.13 | 35.65 |
| Government and Government Enterprises | 49.57 | 48.90 | 48.06 | 44.34 |
| Federal, Civilian                     | 62.33 | 60.41 | 60.26 | 56.82 |
| Military                              | 24.09 | 26.52 | 29.10 | 29.92 |
| State and Local                       | 40.01 | 38.69 | 33.40 | 26.81 |

Notes: "ERR" indicates that data were undisclosed.  
Tables for Buffalo, El Paso, Los Angeles, Phoenix, San Diego  
and Santa Clara were not produced because the counties are  
coterminous with their metropolitan area.

### 3. Counties' share of earnings for 1984:

County shares of earnings in the metro area were, for most cities and in most sectors, larger than the county share of metro employment (See table 23). Earnings per job were higher in the central city counties than in communities which are part of the rest of the metropolitan areas. This pattern was more likely to be true for economic sectors which are tied to the downtown economic activity such as : F.I.R.E., Retail Trade, Services and even Construction.

For 1984, Suffolk Co.'s share of earnings in the Boston metro area was higher than its share of employment for all industrial sectors except for manufacturing and mining, two industries which had little activity in Suffolk Co.

Table 23 presents counties' share of earnings in the metropolitan area for all other cities in the study. Cities in which the central city county is coterminous with the metropolitan area are excluded.

### 4. Employment share:

The employment share is computed by taking the ratio of employment to population in either counties or metropolitan areas. Tables 24 and 25 present employment shares for 1972 and 1984; 1972 is the earliest year common between the employment series and the population/earnings series from the Bureau of Economic Analysis. For central city counties (Table 24), counties with a high employment share are those in which a significant part of the employment goes to people who reside

Table 23A. Fulton and De Kalb Counties Share of Earnings in Atlanta Metropolitan Area, 1984

| Total Earnings by Place of Work       |     | %     |
|---------------------------------------|-----|-------|
| Farm                                  |     | 69.28 |
| Non-farm                              |     | 8.43  |
| Private                               |     | 69.56 |
| Ag.Serv., For., Fish., and Other      | ERR | 69.46 |
| Mining                                | ERR |       |
| Construction                          |     | 57.43 |
| Manufacturing                         |     | 52.20 |
| Non-Durable Goods                     |     | 65.18 |
| Durable Goods                         |     | 42.48 |
| Transportation and Public Utilities   |     | 68.73 |
| Wholesale Trade                       |     | 77.97 |
| Retail Trade                          |     | 64.19 |
| Finance, Insurance and Real Estate    |     | 84.19 |
| Services                              |     | 79.08 |
| Government and Government Enterprises |     | 70.23 |
| Federal, Civilian                     |     | 81.68 |
| Military                              |     | 65.57 |
| State and Local                       |     | 65.70 |



Table 23B. Baltimore City Share of Earnings in Baltimore Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 43.55 |
| Farm                                  | 0.00  |
| Non-farm                              | 43.70 |
| Private                               | 47.32 |
| Ag.Serv., For., Fish., and Other      | ERR   |
| Mining                                | ERR   |
| Construction                          | 31.99 |
| Manufacturing                         | 35.36 |
| Non-Durable Goods                     | 58.06 |
| Durable Goods                         | 23.49 |
| Transportation and Public Utilities   | 63.22 |
| Wholesale Trade                       | 50.21 |
| Retail Trade                          | 39.51 |
| Finance, Insurance and Real Estate    | 67.18 |
| Services                              | 52.41 |
| Government and Government Enterprises | 31.52 |
| Federal, Civilian                     | 18.75 |
| Military                              | 6.05  |
| State and Local                       | 45.15 |

Table 23C. Suffolk County Share of earnings in Boston Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 29.50 |
| Farm                                  | 0.00  |
| Non-farm                              | 29.55 |
| Private                               | 28.25 |
| Ag.Serv., For., Fish., and Other      | ERR   |
| Mining                                | 3.25  |
| Construction                          | 18.90 |
| Manufacturing                         | 10.57 |
| Non-Durable Goods                     | 25.88 |
| Durable Goods                         | 5.86  |
| Transportation and Public Utilities   | 48.23 |
| Wholesale Trade                       | 25.54 |
| Retail Trade                          | 22.12 |
| Finance, Insurance and Real Estate    | 66.83 |
| Services                              | 34.72 |
| Government and Government Enterprises | 38.88 |
| Federal, Civilian                     | 49.71 |
| Military                              | 19.33 |
| State and Local                       | 37.17 |

Table 23E. Cook County Share of Earnings in Chicago Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 88.64 |
| Farm                                  | 17.49 |
| Non-farm                              | 88.68 |
| Private                               | 88.28 |
| Ag.Serv., For., Fish., and Other      | 72.61 |
| Mining                                | 87.94 |
| Construction                          | 84.34 |
| Manufacturing                         | 89.48 |
| Non-Durable Goods                     | 90.67 |
| Durable Goods                         | 88.71 |
| Transportation and Public Utilities   | 90.35 |
| Wholesale Trade                       | 87.29 |
| Retail Trade                          | 86.30 |
| Finance, Insurance and Real Estate    | 92.79 |
| Services                              | 86.40 |
| Government and Government Enterprises | 91.78 |
| Federal, Civilian                     | 95.27 |
| Military                              | 86.07 |
| State and Local                       | 90.98 |

Table 23F. Hamilton County Share of Earnings in Cincinnati Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 80.91 |
| Farm                                  | 15.85 |
| Non-farm                              | 81.03 |
| Private                               | 81.92 |
| Ag.Serv., For., Fish., and Other      | 59.04 |
| Mining                                | 70.79 |
| Construction                          | 74.72 |
| Manufacturing                         | 85.45 |
| Non-Durable Goods                     | 89.95 |
| Durable Goods                         | 82.12 |
| Transportation and Public Utilities   | 80.15 |
| Wholesale Trade                       | 88.90 |
| Retail Trade                          | 72.76 |
| Finance, Insurance and Real Estate    | 87.24 |
| Services                              | 80.09 |
| Government and Government Enterprises | 74.13 |
| Federal, Civilian                     | 77.79 |
| Military                              | 63.20 |
| State and Local                       | 73.36 |



Table 23G. Cuyahoga County Share of Earnings in Cleveland Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 86.83 |
| Farm                                  | 27.61 |
| Non-farm                              | 86.91 |
| Private                               | 86.97 |
| Ag.Serv., For., Fish., and Other      | 64.69 |
| Mining                                | 58.27 |
| Construction                          | 70.83 |
| Manufacturing                         | 84.45 |
| Non-Durable Goods                     | 79.94 |
| Durable Goods                         | 86.18 |
| Transportation and Public Utilities   | 92.97 |
| Wholesale Trade                       | 91.91 |
| Retail Trade                          | 84.64 |
| Finance, Insurance and Real Estate    | 92.32 |
| Services                              | 90.47 |
| Government and Government Enterprises | 86.44 |
| Federal, Civilian                     | 96.29 |
| Military                              | 87.85 |
| State and Local                       | 83.13 |

Table 23H. Franklin County Share of Earnings in Columbus Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 80.74 |
| Farm                                  | 12.44 |
| Non-farm                              | 81.40 |
| Private                               | 81.32 |
| Ag.Serv., For., Fish., and Other      | 79.82 |
| Mining                                | 48.10 |
| Construction                          | 82.62 |
| Manufacturing                         | 66.14 |
| Non-Durable Goods                     | 69.97 |
| Durable Goods                         | 64.33 |
| Transportation and Public Utilities   | 86.58 |
| Wholesale Trade                       | 92.16 |
| Retail Trade                          | 84.90 |
| Finance, Insurance and Real Estate    | 91.03 |
| Services                              | 88.25 |
| Government and Government Enterprises | 81.75 |
| Federal, Civilian                     | 75.30 |
| Military                              | 85.50 |
| State and Local                       | 83.20 |

Table 23I. Dallas County Share of Earnings in Dallas Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 91.39 |
| Farm                                  | 13.42 |
| Non-farm                              | 91.53 |
| Private                               | 92.32 |
| Ag.Serv., For., Fish., and Other      | 80.93 |
| Mining                                | 93.87 |
| Construction                          | 89.17 |
| Manufacturing                         | 88.03 |
| Non-Durable Goods                     | 91.20 |
| Durable Goods                         | 86.73 |
| Transportation and Public Utilities   | 95.13 |
| Wholesale Trade                       | 95.83 |
| Retail Trade                          | 89.37 |
| Finance, Insurance and Real Estate    | 96.14 |
| Services                              | 93.75 |
| Government and Government Enterprises | 83.59 |
| Federal, Civilian                     | 95.22 |
| Military                              | 88.96 |
| State and Local                       | 79.55 |

Table 23J. Denver County Share of Earnings in Denver Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 55.18 |
| Farm                                  | 8.17  |
| Non-farm                              | 55.32 |
| Private                               | 55.14 |
| Ag.Serv., For., Fish., and Other      | 30.25 |
| Mining                                | 71.27 |
| Construction                          | 37.47 |
| Manufacturing                         | 33.98 |
| Non-Durable Goods                     | 50.49 |
| Durable Goods                         | 20.91 |
| Transportation and Public Utilities   | 72.50 |
| Wholesale Trade                       | 65.94 |
| Retail Trade                          | 42.71 |
| Finance, Insurance and Real Estate    | 66.15 |
| Services                              | 60.48 |
| Government and Government Enterprises | 56.36 |
| Federal, Civilian                     | 53.86 |
| Military                              | 80.46 |
| State and Local                       | 54.53 |

Table 23K. Wayne County Share of Earnings in Detroit Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 55.57 |
| Farm                                  | 7.74  |
| Non-farm                              | 55.67 |
| Private                               | 55.07 |
| Ag.Serv., For., Fish., and Other      | 27.97 |
| Mining                                | 18.66 |
| Construction                          | 44.58 |
| Manufacturing                         | 58.83 |
| Non-Durable Goods                     | 56.10 |
| Durable Goods                         | 59.23 |
| Transportation and Public Utilities   | 65.23 |
| Wholesale Trade                       | 51.67 |
| Retail Trade                          | 47.06 |
| Finance, Insurance and Real Estate    | 59.24 |
| Services                              | 50.87 |
| Government and Government Enterprises | 60.28 |
| Federal, Civilian                     | 58.21 |
| Military                              | 50.17 |
| State and Local                       | 60.95 |



Table 23M. Tarrant County Share of Earnings in Fort Worth Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 94.66 |
| Farm                                  | 15.64 |
| Non-farm                              | 94.94 |
| Private                               | 95.06 |
| Ag.Serv., For., Fish., and Other      | ERR   |
| Mining                                | 95.94 |
| Construction                          | 94.68 |
| Manufacturing                         | 95.37 |
| Non-Durable Goods                     | 92.68 |
| Durable Goods                         | 96.20 |
| Transportation and Public Utilities   | 91.35 |
| Wholesale Trade                       | 97.04 |
| Retail Trade                          | 94.22 |
| Finance, Insurance and Real Estate    | 96.44 |
| Services                              | 96.16 |
| Government and Government Enterprises | 94.06 |
| Federal, Civilian                     | 97.99 |
| Military                              | 98.24 |
| State and Local                       | 91.85 |

Table 23N. Harris County Share of Earnings in Houston Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 94.82 |
| Farm                                  | 42.05 |
| Non-farm                              | 94.92 |
| Private                               | 95.41 |
| Ag.Serv., For., Fish., and Other      | 86.96 |
| Mining                                | 94.62 |
| Construction                          | 95.30 |
| Manufacturing                         | 93.25 |
| Non-Durable Goods                     | 96.80 |
| Durable Goods                         | 89.75 |
| Transportation and Public Utilities   | 97.03 |
| Wholesale Trade                       | 97.22 |
| Retail Trade                          | 93.90 |
| Finance, Insurance and Real Estate    | 96.65 |
| Services                              | 96.28 |
| Government and Government Enterprises | 90.31 |
| Federal, Civilian                     | 96.92 |
| Military                              | 90.19 |
| State and Local                       | 88.73 |

Table 230. Marion County Share of Earnings in Indianapolis Metropolitan Area, 1984

%

|                                       |       |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 83.93 |
| Farm                                  | 5.99  |
| Non-farm                              | 84.71 |
| Private                               | 84.75 |
| Ag.Serv., For., Fish., and Other      | 55.89 |
| Mining                                | 83.15 |
| Construction                          | 78.76 |
| Manufacturing                         | 86.06 |
| Non-Durable Goods                     | 84.95 |
| Durable Goods                         | 86.54 |
| Transportation and Public Utilities   | 87.74 |
| Wholesale Trade                       | 87.73 |
| Retail Trade                          | 78.87 |
| Finance, Insurance and Real Estate    | 89.84 |
| Services                              | 86.72 |
| Government and Government Enterprises | 84.47 |
| Federal, Civilian                     | 95.40 |
| Military                              | 91.12 |
| State and Local                       | 79.50 |

Table 23P. Duval County Share of Earnings in Jacksonville Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 89.06 |
| Farm                                  | 38.04 |
| Non-farm                              | 89.31 |
| Private                               | 88.97 |
| Ag.Serv., For., Fish., and Other      | 77.46 |
| Mining                                | 1.98  |
| Construction                          | 89.19 |
| Manufacturing                         | 83.29 |
| Non-Durable Goods                     | 81.12 |
| Durable Goods                         | 85.74 |
| Transportation and Public Utilities   | 93.76 |
| Wholesale Trade                       | 94.19 |
| Retail Trade                          | 84.00 |
| Finance, Insurance and Real Estate    | 96.20 |
| Services                              | 88.04 |
| Government and Government Enterprises | 90.55 |
| Federal, Civilian                     | 90.36 |
| Military                              | 99.54 |
| State and Local                       | 81.56 |

Table 23Q. Clay, Jackson and Platte Counties Share of Earnings in  
 Kansas City Metropolitan Area, 1984  
 %

|                                       |       |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 62.24 |
| Farm                                  | 26.70 |
| Non-farm                              | 62.32 |
| Private                               | 63.10 |
| Ag.Serv., For., Fish., and Other      | ERR   |
| Mining                                | 12.36 |
| Construction                          | 58.89 |
| Manufacturing                         | 66.54 |
| Non-Durable Goods                     | 65.30 |
| Durable Goods                         | 67.32 |
| Transportation and Public Utilities   | 68.47 |
| Wholesale Trade                       | 54.04 |
| Retail Trade                          | 62.12 |
| Finance, Insurance and Real Estate    | 64.62 |
| Services                              | 62.51 |
| Government and Government Enterprises | 57.74 |
| Federal, Civilian                     | 71.00 |
| Military                              | 24.25 |
| State and Local                       | 54.44 |



Table 23S. Shelby County Share of Earnings in Memphis Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 93.07 |
| Farm                                  | 19.80 |
| Non-farm                              | 93.51 |
| Private                               | 93.22 |
| Ag.Serv., For., Fish., and Other      | 79.41 |
| Mining                                | EKR   |
| Construction                          | 91.48 |
| Manufacturing                         | 87.78 |
| Non-Durable Goods                     | 92.26 |
| Durable Goods                         | 82.03 |
| Transportation and Public Utilities   | 96.53 |
| Wholesale Trade                       | 95.14 |
| Retail Trade                          | 92.37 |
| Finance, Insurance and Real Estate    | 97.77 |
| Services                              | 94.94 |
| Government and Government Enterprises | 94.98 |
| Federal, Civilian                     | 98.19 |
| Military                              | 98.38 |
| State and Local                       | 92.37 |

Table 23T. Milwaukee County Share of Earnings in Milwaukee Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 74.63 |
| Farm                                  | 6.64  |
| Non-farm                              | 74.90 |
| Private                               | 74.58 |
| Ag.Serv., For., Fish., and Other      | 36.71 |
| Mining                                | 29.11 |
| Construction                          | 63.37 |
| Manufacturing                         | 71.69 |
| Non-Durable Goods                     | 69.95 |
| Durable Goods                         | 72.24 |
| Transportation and Public Utilities   | 79.51 |
| Wholesale Trade                       | 68.20 |
| Retail Trade                          | 72.38 |
| Finance, Insurance and Real Estate    | 86.01 |
| Services                              | 79.94 |
| Government and Government Enterprises | 77.37 |
| Federal, Civilian                     | 85.69 |
| Military                              | 76.66 |
| State and Local                       | 75.68 |

Table 23U. Hennepin and Ramsey Counties Share of Earnings in  
Minneapolis-St. Paul Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 81.99 |
| Farm                                  | 7.92  |
| Non-farm                              | 82.41 |
| Private                               | 83.09 |
| Ag.Serv., For., Fish., and Other      | ERR   |
| Mining                                | ERR   |
| Construction                          | 74.38 |
| Manufacturing                         | 80.62 |
| Non-Durable Goods                     | 84.82 |
| Durable Goods                         | 78.79 |
| Transportation and Public Utilities   | 86.35 |
| Wholesale Trade                       | ERR   |
| Retail Trade                          | 76.57 |
| Finance, Insurance and Real Estate    | 90.05 |
| Services                              | 86.71 |
| Government and Government Enterprises | 77.58 |
| Federal, Civilian                     | 87.56 |
| Military                              | 75.54 |
| State and Local                       | 75.67 |

Table 23V. Davidson County Share of Earnings in Nashville Metropolitan Area, 1984

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|                                       |       |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 75.78 |
| Farm                                  | 6.68  |
| Non-farm                              | 76.28 |
| Private                               | 76.69 |
| Ag.Serv., For., Fish., and other      | ERR   |
| Mining                                | 88.14 |
| Construction                          | 73.82 |
| Manufacturing                         | 59.18 |
| Non-Durable Goods                     | 68.15 |
| Durable Goods                         | 54.93 |
| Transportation and Public Utilities   | 85.32 |
| Wholesale Trade                       | 89.30 |
| Retail Trade                          | 80.37 |
| Finance, Insurance and Real Estate    | 85.53 |
| Services                              | 83.99 |
| Government and Government Enterprises | 73.47 |
| Federal, Civilian                     | 72.61 |
| Military                              | 71.69 |
| State and Local                       | 73.80 |

Table 23W. Orleans County Share of Earnings in New Orleans Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 57.67 |
| Farm                                  | 0.00  |
| Non-farm                              | 57.70 |
| Private                               | 56.27 |
| Ag.Serv., For., Fish., and Other      | 35.68 |
| Mining                                | 75.50 |
| Construction                          | 36.09 |
| Manufacturing                         | 39.07 |
| Non-Durable Goods                     | 29.68 |
| Durable Goods                         | 49.35 |
| Transportation and Public Utilities   | 64.63 |
| Wholesale Trade                       | 48.64 |
| Retail Trade                          | 44.27 |
| Finance, Insurance and Real Estate    | 67.43 |
| Services                              | 66.55 |
| Government and Government Enterprises | 66.60 |
| Federal, Civilian                     | 86.59 |
| Military                              | 82.67 |
| State and Local                       | 58.87 |



Table 23X. Bronx, Kings, New York, Queens and Richmond Counties Share of Earnings in  
New York City Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 88.18 |
| Farm                                  | 0.00  |
| Non-farm                              | 88.18 |
| Private                               | 88.12 |
| Ag.Serv., For., Fish., and other      | ERR   |
| Mining                                | 97.11 |
| Construction                          | 79.65 |
| Manufacturing                         | 78.61 |
| Non-Durable Goods                     | 84.50 |
| Durable Goods                         | 65.70 |
| Transportation and Public Utilities   | 91.46 |
| Wholesale Trade                       | 88.70 |
| Retail Trade                          | 84.13 |
| Finance, Insurance and Real Estate    | 96.33 |
| Services                              | 88.24 |
| Government and Government Enterprises | 88.58 |
| Federal, Civilian                     | 91.71 |
| Military                              | 93.41 |
| State and Local                       | 87.87 |

Table 23Y. Oklahoma County Share of Earnings in Oklahoma City Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 84.46 |
| Farm                                  | 10.41 |
| Non-farm                              | 84.63 |
| Private                               | 85.86 |
| Ag.Serv., For., Fish., and Other      | 66.49 |
| Mining                                | 88.30 |
| Construction                          | 76.63 |
| Manufacturing                         | 86.66 |
| Non-Durable Goods                     | 86.18 |
| Durable Goods                         | 86.84 |
| Transportation and Public Utilities   | 88.88 |
| Wholesale Trade                       | 91.53 |
| Retail Trade                          | 79.69 |
| Finance, Insurance and Real Estate    | 88.77 |
| Services                              | 86.53 |
| Government and Government Enterprises | 80.20 |
| Federal, Civilian                     | 94.95 |
| Military                              | 89.20 |
| State and Local                       | 68.94 |

Table 23Z. Philadelphia County Share of Earnings in Philadelphia Metropolitan Area, 1984

&

|                                       |       |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 38.85 |
| Farm                                  | -0.21 |
| Non-farm                              | 38.95 |
| Private                               | 36.68 |
| Ag.Serv., For., Fish., and other      | 9.50  |
| Mining                                | 22.25 |
| Construction                          | 22.68 |
| Manufacturing                         | 25.82 |
| Non-Durable Goods                     | 36.34 |
| Durable Goods                         | 17.09 |
| Transportation and Public Utilities   | 53.07 |
| Wholesale Trade                       | 35.99 |
| Retail Trade                          | 32.19 |
| Finance, Insurance and Real Estate    | 53.28 |
| Services                              | 43.03 |
| Government and Government Enterprises | 52.20 |
| Federal, Civilian                     | 69.28 |
| Military                              | 37.00 |
| State and Local                       | 45.73 |

Table 23AB. Allegheny County Share of Earnings in Pittsburgh Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 77.30 |
| Farm                                  | 15.48 |
| Non-farm                              | 77.41 |
| Private                               | 77.64 |
| Ag.Serv., For., Fish., and Other      | 75.61 |
| Mining                                | 37.26 |
| Construction                          | 79.10 |
| Manufacturing                         | 72.22 |
| Non-Durable Goods                     | 82.19 |
| Durable Goods                         | 69.33 |
| Transportation and Public Utilities   | 74.99 |
| Wholesale Trade                       | 81.14 |
| Retail Trade                          | 74.95 |
| Finance, Insurance and Real Estate    | 89.24 |
| Services                              | 83.16 |
| Government and Government Enterprises | 75.66 |
| Federal, Civilian                     | 88.88 |
| Military                              | 73.69 |
| State and Local                       | 71.93 |

Table 23AC. Bexar County Share of Earnings In San Antonio Metropolitan Area, 1984

%

|                                       |       |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 94.96 |
| Farm                                  | 54.34 |
| Non-farm                              | 95.06 |
| Private                               | 94.07 |
| Ag.Serv., For., Fish., and other      | 92.81 |
| Mining                                | 93.80 |
| Construction                          | 93.52 |
| Manufacturing                         | 84.22 |
| Non-Durable Goods                     | 89.12 |
| Durable Goods                         | 80.59 |
| Transportation and Public Utilities   | 96.28 |
| Wholesale Trade                       | 96.78 |
| Retail Trade                          | 95.26 |
| Finance, Insurance and Real Estate    | 97.60 |
| Services                              | 96.39 |
| Government and Government Enterprises | 97.48 |
| Federal, Civilian                     | 99.31 |
| Military                              | 99.80 |
| State and Local                       | 94.14 |



Table 23AE. San Francisco County Share of Earnings in San Francisco Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 63.17 |
| Farm                                  | 0.00  |
| Non-farm                              | 63.45 |
| Private                               | 62.25 |
| Ag.Serv., For., Fish., and Other      | ERR   |
| Mining                                | 98.27 |
| Construction                          | 45.96 |
| Manufacturing                         | 54.54 |
| Non-Durable Goods                     | 71.33 |
| Durable Goods                         | 30.56 |
| Transportation and Public Utilities   | 58.20 |
| Wholesale Trade                       | 58.10 |
| Retail Trade                          | 51.17 |
| Finance, Insurance and Real Estate    | 78.44 |
| Services                              | 65.84 |
| Government and Government Enterprises | 71.18 |
| Federal, Civilian                     | 82.48 |
| Military                              | 87.36 |
| State and Local                       | 64.87 |

Table 23Ag. King County Share of Earnings in Seattle Metropolitan Area, 1984

%

|                                       |       |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 88.13 |
| Farm                                  | 56.46 |
| Non-farm                              | 88.25 |
| Private                               | 88.48 |
| Ag.Serv., For., Fish., and Other      | 86.46 |
| Mining                                | 76.53 |
| Construction                          | 85.85 |
| Manufacturing                         | 83.62 |
| Non-Durable Goods                     | 84.25 |
| Durable Goods                         | 83.51 |
| Transportation and Public Utilities   | 90.65 |
| Wholesale Trade                       | 94.87 |
| Retail Trade                          | 85.71 |
| Finance, Insurance and Real Estate    | 95.57 |
| Services                              | 90.94 |
| Government and Government Enterprises | 86.86 |
| Federal, Civilian                     | 95.34 |
| Military                              | 89.90 |
| State and Local                       | 84.41 |

Table 23AH. St.Louis City Share of Earnings in St.Louis Metropolitan Area, 1984

|                                       | %     |
|---------------------------------------|-------|
| Total Earnings by Place of Work       | 30.66 |
| Farm                                  | 0.00  |
| Non-farm                              | 30.74 |
| Private                               | 29.63 |
| Ag.Serv., For., Fish., and Other      | 6.37  |
| Mining                                | 13.68 |
| Construction                          | 18.29 |
| Manufacturing                         | 27.16 |
| Non-Durable Goods                     | 46.58 |
| Durable Goods                         | 16.13 |
| Transportation and Public Utilities   | 43.49 |
| Wholesale Trade                       | 34.32 |
| Retail Trade                          | 19.38 |
| Finance, Insurance and Real Estate    | 38.58 |
| Services                              | 31.00 |
| Government and Government Enterprises | 38.63 |
| Federal, Civilian                     | 63.42 |
| Military                              | 20.99 |
| State and Local                       | 28.21 |

Table 23AI. District of Columbia Share of Earnings in Washington Metropolitan Area, 1984

| Total Earnings by Place of Work       |  | %     |
|---------------------------------------|--|-------|
| Farm                                  |  | 36.63 |
| Non-farm                              |  | 0.00  |
| Private                               |  | 36.69 |
| Ag.Serv., For., Fish., and Other      |  | 29.94 |
| Mining                                |  | 60.34 |
| Construction                          |  | ERR   |
| Manufacturing                         |  | 12.25 |
| Non-Durable Goods                     |  | 21.28 |
| Durable Goods                         |  | 37.77 |
| Transportation and Public Utilities   |  | 4.88  |
| Wholesale Trade                       |  | 31.87 |
| Retail Trade                          |  | 14.04 |
| Finance, Insurance and Real Estate    |  | 17.84 |
| Services                              |  | 37.10 |
| Government and Government Enterprises |  | 37.83 |
| Federal, Civilian                     |  | 48.64 |
| Military                              |  | 58.46 |
| State and Local                       |  | 22.93 |
|                                       |  | 32.80 |

Note: ERR indicates that data were missing.

Tables for Buffalo, El Paso, Los Angeles, Phoenix, San Diego, and Santa Clara were not produced because the counties are coterminous with their metropolitan area.

outside the county; it is one in which there is a lot of commuting into the city. Counties with a low employment share are those in which the central city is not the place in which employment is concentrated. This measure does not take account of the fact that there might be commuting out of the central city. In other words, a low employment share does not necessarily mean that all the employment which is located in the county goes to county residents. An employment share could be low and there still could be substantial commuting activity in and out of an area. Were there no commuting into and out of an area, one would expect the employment to population ratio to be closely related to the labor force participation rate and to the unemployment rate.

The same definition holds true for the employment share in metropolitan areas (Table 25). The employment to population ratio is expected to be higher for central city counties than for their corresponding metropolitan area because the latter is more likely to encompass both place of work and residence. It was higher in most of the cities in this study.

The central city counties with a high employment share were:

| <u>1972</u>      |        | <u>1984</u>      |         |
|------------------|--------|------------------|---------|
| D. of Columbia   | 90.3 % | D. of Columbia   | 112.3 % |
| Suffolk (Boston) | 77.1   | Denver           | 100.1   |
| St.Louis         | 77.1   | Suffolk (Boston) | 92.9    |
| Denver           | 76.3   | St.Louis         | 87.6    |



The central city counties with a low employment share were:

| <u>1972</u>            |        | <u>1984</u>     |        |
|------------------------|--------|-----------------|--------|
| El Paso                | 40.8 % | El Paso         | 42.0 % |
| Erie (Buffalo)         | 41.5   | Wayne (Detroit) | 45.3   |
| Santa Clara (San Jose) | 41.9   | Erie (Buffalo)  | 47.2   |

Metropolitan areas with a high employment share were:

| <u>1972</u>    |        | <u>1984</u>    |        |
|----------------|--------|----------------|--------|
| San Francisco  | 57.3 % | San Francisco  | 72.5 % |
| Dallas         | 52.7   | San Jose       | 66.7   |
| Washington, DC | 51.4   | Dallas         | 66.5   |
| Denver         | 51.3   | Washington, DC | 64.0   |

Metropolitan areas with a low employment share were:

| <u>1972</u> |        | <u>1984</u> |        |
|-------------|--------|-------------|--------|
| Detroit     | 40.4 % | El Paso     | 42.0 % |
| Pittsburgh  | 40.6   | Detroit     | 44.2   |
| El Paso     | 40.8   | Pittsburgh  | 45.0   |

The employment share for the Boston metropolitan area was 47.4 percent in 1972 and 62.3 percent in 1984.

Even though the employment share was higher in metro areas than in central city counties for most cities, those for which the county employment share was among the lowest did not have a higher employment share for the metro area either. In these cases, more factors were at play than commuting patterns and geographic location of employment within an area. Some other factors might include little employment growth in the area, both in the county and the metro area. For instance, two of the cities with low employment shares were Detroit and Pittsburgh which experienced employment declines in their major industrial

sectors in the latter part of the period. Between 1978 and 1984, total non-farm employment declined at an annual rate of -1.11 percent in the Detroit metro area, and of -0.67 percent in the Pittsburgh metro area. The corresponding figures for Wayne County (Detroit) is -2.70 percent and that for Allegheny Co. (Pittsburgh) is -0.56 percent.

El Paso, the other city with low employment shares, did not fit this description since it experienced employment growth over the whole period 1972-84. In its case, employment maybe spread out over an area much larger than even the metropolitan area. El Paso County is coterminous with the metropolitan area, already giving an indication that economic activity is spread out rather than concentrated.

Employment shares increased between 1969 and 1984; an indication that more employment was located in the county or metro area and that more area residents commuted. All central city counties experienced an increase in employment share between 1972 and 1984, except for Philadelphia which showed a slight decline from 52.7 percent to 51.0 percent. Counties which showed the highest percentage point increase were:

|                             | 1972   | 1984   |
|-----------------------------|--------|--------|
| Santa Clara (San Jose)      | 41.9 % | 66.7 % |
| Denver                      | 76.3   | 100.1  |
| Fulton and DeKalb (Atlanta) | 63.4   | 82.4   |
| Kings (Seattle)             | 47.0   | 63.4   |

All metropolitan areas, with no exception, showed an increase in employment share between 1972 and 1984. Those areas

which showed the highest percentage point jump in employment share were:

|                        | 1972   | 1984   |
|------------------------|--------|--------|
| Santa Clara (San Jose) | 41.9 % | 66.7 % |
| San Francisco          | 57.3   | 72.5   |
| Seattle                | 43.8   | 57.7   |
| Dallas                 | 52.7   | 66.5   |
| Washington, DC         | 51.4   | 64.0   |

Table 24: Central City Counties Employment to Population Ratio; 1972 and 1984

|                                          | Ratio of<br>Employment to<br>Population-1972<br>% | Ratio of<br>Employment to<br>Population-1984<br>% |
|------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| Atlanta                                  | 63.4                                              | 82.4                                              |
| Baltimore                                | 59.5                                              | 67.7                                              |
| BOSTON                                   | 77.1                                              | 92.9                                              |
| Buffalo                                  | 41.5                                              | 47.2                                              |
| Chicago                                  | 49.6                                              | 53.6                                              |
| Cincinnati                               | 52.5                                              | 62.0                                              |
| Cleveland                                | 49.9                                              | 56.2                                              |
| Columbus                                 | 49.9                                              | 59.9                                              |
| Dallas                                   | 56.4                                              | 74.9                                              |
| Denver                                   | 76.3                                              | 100.1                                             |
| Detroit                                  | 44.8                                              | 45.3                                              |
| El Paso                                  | 40.8                                              | 42.0                                              |
| Fort Worth                               | 43.9                                              | 52.6                                              |
| Houston                                  | 49.6                                              | 58.7                                              |
| Indianapolis                             | 55.1                                              | 65.2                                              |
| Jacksonville                             | 49.2                                              | 59.6                                              |
| Kansas City                              | 53.9                                              | 60.3                                              |
| Los Angeles                              | 47.5                                              | 56.4                                              |
| Memphis                                  | 50.3                                              | 59.9                                              |
| Milwaukee                                | 49.6                                              | 58.0                                              |
| Minn.-St. Paul                           | 57.3                                              | 73.8                                              |
| Nashville                                | 57.9                                              | 73.5                                              |
| New Orleans                              | 56.7                                              | 63.7                                              |
| New York                                 | 50.9                                              | 54.4                                              |
| Oklahoma City                            | 55.0                                              | 70.4                                              |
| Philadelphia                             | 52.7                                              | 51.0                                              |
| Phoenix                                  | 44.2                                              | 53.4                                              |
| Pittsburgh                               | 44.8                                              | 51.4                                              |
| San Antonio                              | 44.6                                              | 50.8                                              |
| San Diego                                | 44.4                                              | 51.9                                              |
| San Francisco                            | 77.2                                              | 92.7                                              |
| San Jose                                 | 41.9                                              | 66.7                                              |
| Seattle                                  | 47.0                                              | 63.4                                              |
| St. Louis                                | 77.1                                              | 87.6                                              |
| St. Louis District of Columbia           | 90.3                                              | 112.3                                             |
| Fulton, De Kalb                          |                                                   |                                                   |
| Baltimore City                           |                                                   |                                                   |
| SUFFOLK, MA                              |                                                   |                                                   |
| Erie                                     |                                                   |                                                   |
| Cook                                     |                                                   |                                                   |
| Hamilton                                 |                                                   |                                                   |
| Cuyahoga                                 |                                                   |                                                   |
| Franklin                                 |                                                   |                                                   |
| Dallas                                   |                                                   |                                                   |
| Denver                                   |                                                   |                                                   |
| Wayne                                    |                                                   |                                                   |
| El Paso                                  |                                                   |                                                   |
| Tarrant                                  |                                                   |                                                   |
| Harris                                   |                                                   |                                                   |
| Marion                                   |                                                   |                                                   |
| Duval                                    |                                                   |                                                   |
| Clay, Jackson, Plate                     |                                                   |                                                   |
| Los Angeles                              |                                                   |                                                   |
| Shelby                                   |                                                   |                                                   |
| Milwaukee                                |                                                   |                                                   |
| Hennepin, Ramsey                         |                                                   |                                                   |
| Davidson                                 |                                                   |                                                   |
| Orleans                                  |                                                   |                                                   |
| Bronx, Kings, New York, Queens, Richmond |                                                   |                                                   |
| Oklahoma                                 |                                                   |                                                   |
| Philadelphia                             |                                                   |                                                   |
| Maricopa                                 |                                                   |                                                   |
| Allegheny                                |                                                   |                                                   |
| Bexar                                    |                                                   |                                                   |
| San Diego                                |                                                   |                                                   |
| San Francisco                            |                                                   |                                                   |
| Santa Clara                              |                                                   |                                                   |
| Kings                                    |                                                   |                                                   |
| St. Louis                                |                                                   |                                                   |
| St. Louis District of Columbia           |                                                   |                                                   |

Table 25: Metropolitan Areas - Employment to Population Ratio; 1972 and 1984

|                                           | Ratio of<br>Employment to<br>Population-1972<br>% | Ratio of<br>Employment to<br>Population-1984<br>% |
|-------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| Atlanta                                   | 50.6                                              | 59.6                                              |
| Baltimore                                 | 46.4                                              | 53.5                                              |
| Boston -Lawrence -Salem -Lowell -Brockton | 47.4                                              | 62.3                                              |
| Buffalo                                   | 41.5                                              | 47.2                                              |
| Chicago                                   | 48.1                                              | 52.9                                              |
| Cincinnati                                | 43.4                                              | 50.3                                              |
| Cleveland                                 | 46.6                                              | 52.1                                              |
| Columbus                                  | 46.6                                              | 53.4                                              |
| Dallas                                    | 52.7                                              | 66.5                                              |
| Denver                                    | 51.3                                              | 62.5                                              |
| Detroit                                   | 40.4                                              | 44.2                                              |
| El Paso                                   | 40.8                                              | 42.0                                              |
| Fort Worth -Arlington                     | 42.6                                              | 50.2                                              |
| Houston                                   | 47.8                                              | 54.9                                              |
| Indianapolis                              | 47.2                                              | 54.0                                              |
| Jacksonville                              | 46.7                                              | 53.6                                              |
| Kansas City                               | 47.8                                              | 55.7                                              |
| Los Angeles -Long Beach                   | 47.5                                              | 56.4                                              |
| Memphis                                   | 47.8                                              | 51.6                                              |
| Milwaukee                                 | 46.5                                              | 54.8                                              |
| Minn.-St. Paul                            | 48.9                                              | 60.8                                              |
| Nashville                                 | 49.8                                              | 56.9                                              |
| New Orleans                               | 43.7                                              | 49.3                                              |
| New York                                  | 49.5                                              | 53.7                                              |
| Oklahoma City                             | 48.4                                              | 57.3                                              |
| Philadelphia                              | 44.1                                              | 48.8                                              |
| Phoenix                                   | 44.2                                              | 53.4                                              |
| Pittsburgh                                | 40.6                                              | 45.0                                              |
| San Antonio                               | 44.0                                              | 49.9                                              |
| San Diego                                 | 44.4                                              | 51.9                                              |
| San Francisco                             | 57.3                                              | 72.5                                              |
| San Jose                                  | 41.9                                              | 66.7                                              |
| Seattle                                   | 43.8                                              | 57.7                                              |
| St. Louis                                 | 44.5                                              | 53.0                                              |
| Washington, DC -Md -Va                    | 51.4                                              | 64.0                                              |



TABLE 26: Central City Counties Employment and Population; 1972 and 1984

|                | Total<br>Employment<br>1972<br>(1000'S) | Total<br>Employment<br>1984<br>(1000'S) | Population<br>1972<br>(1000'S) | Population<br>1984<br>(1000'S) |
|----------------|-----------------------------------------|-----------------------------------------|--------------------------------|--------------------------------|
| Atlanta        | 678.2                                   | 919.7                                   | 1069.7                         | 1116.7                         |
| Baltimore      | 535.0                                   | 517.2                                   | 899.8                          | 763.6                          |
| BOSTON         | 567.8                                   | 611.8                                   | 736.1                          | 658.8                          |
| Buffalo        | 461.4                                   | 465.4                                   | 1112.8                         | 985.3                          |
| Chicago        | 2732.2                                  | 2826.7                                  | 5505.9                         | 5270.4                         |
| Cincinnati     | 479.8                                   | 535.9                                   | 913.9                          | 864.0                          |
| Cleveland      | 833.6                                   | 821.4                                   | 1670.0                         | 1460.6                         |
| Columbus       | 427.4                                   | 535.4                                   | 857.2                          | 893.8                          |
| Dallas         | 763.3                                   | 1290.3                                  | 1353.3                         | 1723.4                         |
| Denver         | 401.0                                   | 505.3                                   | 525.8                          | 504.6                          |
| Detroit        | 1188.4                                  | 990.3                                   | 2652.5                         | 2186.1                         |
| El Paso        | 154.2                                   | 221.1                                   | 378.4                          | 526.5                          |
| Fort Worth     | 316.8                                   | 531.5                                   | 721.9                          | 1010.3                         |
| Houston        | 910.5                                   | 1613.6                                  | 1836.3                         | 2747.3                         |
| Indianapolis   | 439.0                                   | 505.1                                   | 796.5                          | 774.8                          |
| Jacksonville   | 266.3                                   | 365.4                                   | 541.1                          | 612.7                          |
| Kansas City    | 439.7                                   | 495.4                                   | 816.4                          | 821.1                          |
| Los Angeles    | 3349.8                                  | 4458.1                                  | 7056.6                         | 7901.2                         |
| Memphis        | 372.7                                   | 437.1                                   | 741.1                          | 729.6                          |
| Milwaukee      | 525.0                                   | 552.9                                   | 1058.6                         | 954.1                          |
| Minn.-St. Paul | 812.5                                   | 1061.4                                  | 1417.0                         | 1437.6                         |
| Nashville      | 264.1                                   | 357.0                                   | 456.3                          | 485.4                          |
| New Orleans    | 337.5                                   | 356.0                                   | 595.0                          | 559.1                          |
| New York       | 3990.8                                  | 3895.2                                  | 7835.5                         | 7164.8                         |
| Oklahoma City  | 302.2                                   | 438.0                                   | 549.2                          | 622.4                          |
| Philadelphia   | 997.3                                   | 840.3                                   | 1893.1                         | 1646.7                         |
| Phoenix        | 480.8                                   | 916.1                                   | 1087.2                         | 1714.8                         |
| Pittsburgh     | 704.6                                   | 725.2                                   | 1573.5                         | 1409.8                         |
| San Antonio    | 391.2                                   | 554.4                                   | 876.6                          | 1092.1                         |
| San Diego      | 636.9                                   | 1071.5                                  | 1433.1                         | 2063.9                         |
| San Francisco  | 540.4                                   | 660.4                                   | 700.2                          | 712.8                          |
| San Jose       | 477.3                                   | 914.6                                   | 1138.8                         | 1371.5                         |
| Seattle        | 534.8                                   | 839.8                                   | 1138.9                         | 1324.0                         |
| St. Louis      | 446.6                                   | 375.9                                   | 579.6                          | 429.3                          |
|                |                                         |                                         |                                | 622.8                          |

Table 27: Metropolitan Areas - Employment and Population; 1972 and 1984

|                | Total<br>Employment<br>1972<br>(1000'S) | Total<br>Employment<br>1984<br>(1000'S) | Population<br>1972<br>(1000'S) | Population<br>1984<br>(1000'S) |
|----------------|-----------------------------------------|-----------------------------------------|--------------------------------|--------------------------------|
| Atlanta        | 915.3                                   | 1417.4                                  | 1808.6                         | 2380.0                         |
| Baltimore      | 998.5                                   | 1201.8                                  | 2152.2                         | 2244.7                         |
| BOSTON         | 1778.3                                  | 2302.1                                  | 3755.3                         | 3695.4                         |
| Buffalo        | 461.4                                   | 465.4                                   | 1112.8                         | 985.3                          |
| Chicago        | 2952.7                                  | 3244.3                                  | 6139.2                         | 6128.3                         |
| Cincinnati     | 600.6                                   | 708.2                                   | 1383.7                         | 1408.1                         |
| Cleveland      | 940.5                                   | 973.5                                   | 2016.9                         | 1867.0                         |
| Columbus       | 552.1                                   | 682.7                                   | 1185.5                         | 1279.0                         |
| Dallas         | 848.1                                   | 1465.7                                  | 1610.1                         | 2203.7                         |
| Denver         | 610.7                                   | 988.7                                   | 1191.4                         | 1582.5                         |
| Detroit        | 1850.1                                  | 1906.2                                  | 4576.9                         | 4315.8                         |
| El Paso        | 154.2                                   | 221.1                                   | 378.4                          | 526.5                          |
| Fort Worth     | 342.9                                   | 574.1                                   | 804.6                          | 1144.4                         |
| Houston        | 963.1                                   | 1736.3                                  | 2015.5                         | 3164.2                         |
| Indianapolis   | 531.7                                   | 645.6                                   | 1127.4                         | 1194.6                         |
| Jacksonville   | 296.8                                   | 426.0                                   | 635.7                          | 795.3                          |
| Kansas City    | 666.3                                   | 822.7                                   | 1393.8                         | 1476.7                         |
| Los Angeles    | 3349.8                                  | 4458.1                                  | 7056.6                         | 7901.2                         |
| Memphis        | 409.6                                   | 482.2                                   | 857.3                          | 934.6                          |
| Milwaukee      | 658.2                                   | 763.5                                   | 1416.0                         | 1393.8                         |
| Minn.-St. Paul | 980.0                                   | 1356.5                                  | 2004.0                         | 2230.9                         |
| Nashville      | 365.1                                   | 506.7                                   | 732.5                          | 890.3                          |
| New Orleans    | 499.2                                   | 649.7                                   | 1142.4                         | 1318.8                         |
| New York       | 4465.4                                  | 4496.3                                  | 9026.7                         | 8376.9                         |
| Oklahoma City  | 369.4                                   | 551.3                                   | 763.2                          | 962.6                          |
| Philadelphia   | 2132.1                                  | 2328.9                                  | 4837.6                         | 4768.4                         |
| Phoenix        | 480.8                                   | 916.1                                   | 1087.2                         | 1714.8                         |
| Pittsburgh     | 945.7                                   | 977.5                                   | 2331.9                         | 2172.8                         |
| San Antonio    | 414.4                                   | 593.1                                   | 941.2                          | 1188.5                         |
| San Diego      | 636.9                                   | 1071.5                                  | 1433.1                         | 2063.9                         |
| San Francisco  | 841.1                                   | 1117.7                                  | 1467.4                         | 1541.9                         |
| San Jose       | 477.3                                   | 914.6                                   | 1138.8                         | 1371.5                         |
| Seattle        | 613.2                                   | 977.1                                   | 1401.6                         | 1692.0                         |
| St. Louis      | 1072.1                                  | 1271.5                                  | 2409.6                         | 2398.4                         |
| Washington, DC | 1626.6                                  | 2194.8                                  | 3163.1                         | 3429.4                         |

## APPENDIX A

### The Bureau of Economic Analysis Employment and Earnings Series

Most of the data for this report come from the Regional Economics Information System of the Bureau of Economic Analysis. They measure economic activity in terms of employment and earned income, by place of work. These data are reasonably consistent between cities and time periods and provide a means for comparing economic structure and trends. The industrial sectors (1-digit Standard Industrial Classifications) are broad, but sufficient to measure large changes.

Most of the analysis focuses on metropolitan areas since they are more easily comparable than individual counties. Metropolitan area boundaries are drawn to reflect economic functions and linkages as well as commuting patterns. The metropolitan areas are Metropolitan Statistical Areas or Primary Metropolitan Statistical Areas (see list below). The Boston metropolitan area is a five-county area, a New England County Metropolitan Area.

#### List of Metropolitan Areas

|                                               |       |
|-----------------------------------------------|-------|
| PHOENIX, AZ                                   | PMSA  |
| LOS ANGELES -LONG BEACH, CA                   | MSA   |
| SAN DIEGO, CA                                 | MSA   |
| SAN FRANCISCO, CA                             | PMSA  |
| SAN JOSE, CA                                  | PMSA  |
| DENVER, CO                                    | PMSA  |
| WASHINGTON, DC -MD -VA                        | MSA   |
| JACKSONVILLE, FL                              | MSA   |
| ATLANTA, GA                                   | MSA   |
| CHICAGO, IL                                   | PMSA  |
| INDIANAPOLIS, IN                              | MSA   |
| NEW ORLEANS, LA                               | MSA   |
| BALTIMORE, MD                                 | MSA   |
| BOSTON -LAWRENCE -SALEM -LOWELL -BROCKTON, MA | NECMA |
| DETROIT, MI                                   | PMSA  |
| MINNEAPOLIS -ST.PAUL, MN -WI                  | MSA   |
| KANSAS CITY, MO -KS                           | MSA   |
| ST. LOUIS, MO -IL                             | MSA   |
| BUFFALO, NY                                   | PMSA  |
| NEW YORK, NY                                  | PMSA  |
| CINCINNATI, OH -KY -IN                        | PMSA  |
| CLEVELAND, OH                                 | PMSA  |
| COLUMBUS, OH                                  | MSA   |
| OKLAHOMA CITY, OK                             | MSA   |
| PHILADELPHIA, PA -NJ                          | PMSA  |
| PITTSBURGH, PA                                | PMSA  |
| MEMPHIS, TN -AR -MS                           | MSA   |

### List of Metropolitan Areas

|                           |      |
|---------------------------|------|
| NASHVILLE, TN             | MSA  |
| DALLAS, TX                | PMSA |
| EL PASO, TX               | MSA  |
| FORT WORTH -ARLINGTON, TX | PMSA |
| HOUSTON, TX               | PMSA |
| SAN ANTONIO, TX           | MSA  |
| SEATTLE, WA               | PMSA |
| MILWAUKEE, WI             | PMSA |

The scarcity of data specific to central cities leads to the use of data for central city counties for part of the analysis. For some cities, the central city county matches the central city quite well (see table A). Central city counties do not include much suburban territory, and county boundaries have not changed over time.



Table A. Total City Employment Relative to Central City  
Counties' Employment; 1980

| City<br>Name   | %<br>Share | Total<br>City<br>Employment | Total<br>Counties<br>Employment | COUNTY<br>NAMES                   |
|----------------|------------|-----------------------------|---------------------------------|-----------------------------------|
| New York City* | 101        | 2,976,211                   | 2,934,600                       | Bronx, Kings, N.Y., Queens, Richm |
| Baltimore*     | 100        | 387,930                     | 387,930                         | Baltimore                         |
| Denver         | 100        | 362,982                     | 362,982                         | Denver                            |
| New Orleans    | 100        | 243,844                     | 243,844                         | Orleans                           |
| Philadelphia   | 100        | 698,282                     | 698,282                         | Philadelphia                      |
| San Francisco  | 100        | 458,745                     | 458,745                         | San Francisco                     |
| St. Louis*     | 100        | 314,831                     | 314,831                         | St. Louis                         |
| Washington     | 100        | 593,917                     | 593,917                         | Dstr. of Col.                     |
| Jacksonville   | 96         | 234,378                     | 244,217                         | Duval                             |
| El Paso        | 95         | 158,023                     | 166,206                         | El Paso                           |
| Boston         | 95         | 421,279                     | 443,561                         | Suffolk                           |
| Nashville      | 92         | 232,029                     | 251,796                         | Davidson                          |
| Indianapolis   | 92         | 365,529                     | 399,121                         | Marion                            |
| Memphis        | 89         | 285,005                     | 321,318                         | Shelby                            |
| San Antonio    | 88         | 350,257                     | 395,909                         | Bexar                             |
| Oklahoma City  | 85         | 249,369                     | 292,028                         | Oklahoma                          |
| Houston        | 81         | 917,826                     | 1,132,073                       | Harris                            |
| Columbus       | 76         | 303,193                     | 397,477                         | Franklin                          |
| Kansas City    | 72         | 280,441                     | 387,556                         | Clay, Jackson, Platte             |
| Dallas         | 71         | 601,529                     | 845,112                         | Dallas                            |
| Milwaukee      | 67         | 306,685                     | 456,126                         | Milwaukee                         |
| Phoenix        | 61         | 361,993                     | 596,215                         | Maricopa                          |
| San Diego      | 59         | 448,546                     | 756,356                         | San Diego                         |
| Fort Worth     | 59         | 210,574                     | 355,730                         | Tarrant                           |
| Cincinnati     | 58         | 258,315                     | 443,835                         | Hamilton                          |
| Chicago        | 57         | 1,272,391                   | 2,229,898                       | Cook                              |
| Seattle        | 57         | 359,470                     | 634,235                         | King                              |
| Minn-St. Paul  | 55         | 439,589                     | 795,477                         | Hennepin, Ramsey                  |
| Atlanta        | 54         | 336,163                     | 619,047                         | Fulton, DeKalb                    |
| Detroit        | 51         | 424,712                     | 840,101                         | Wayne                             |
| Cleveland      | 50         | 342,059                     | 679,165                         | Cuyahoga                          |
| Pittsburgh     | 49         | 309,778                     | 628,157                         | Allegheny                         |
| Buffalo        | 48         | 187,614                     | 391,080                         | Erie                              |
| Los Angeles    | 44         | 1,416,040                   | 3,222,572                       | Los Angeles                       |
| San Jose       | 33         | 200,791                     | 612,827                         | San Jose                          |

Note: Ratio is computed by taking the share of city employment which is in the central city counties over total employment in counties.

Source: US Bureau of the Census, Census of Population, Subject Reports Journey to Work (Wash., DC: USGPO, July 1984.)

\* Baltimore and St. Louis do not have a central city county. Data for New York City include workers who reported NYC as their workplace without specifying the county in which the workplace was located. Thus, the sum of the data for the individual counties is less than the city total.



## APPENDIX B

### Years Selected for Analysis

We conducted most of our analysis of the BEA employment series using the years 1969, 1972, 1978 and 1984. The year 1969 is the first year for which the series is available but also represents the end of a long period of sustained growth (see attached table on growth rates). The other years were picked as close to the middle of a period of sustained growth as possible. Employment in 1978 shows a marked improvement from 1972, in many cities and many sectors probably because 1978 was the second year of a recovery period. The year 1980 was excluded from this analysis primarily because data were missing or undisclosed for Boston in many of the key industrial sectors.

For the more limited analysis of the earnings series, we used the years 1959 (the first for the series), 1972, 1978 and 1984. We chose these years for comparison with the employment changes. To permit comparisons across years, we adjusted all figures to a 1984 base with multipliers derived from the Fixed-weighted Price Index for the Gross National Product.

#### Fixed-weighted Price Index for Gross National Product, 1982 Weights, 1959 to 1985

| Year | GNP Index | Percent Change | Multiplier<br>1984 base |
|------|-----------|----------------|-------------------------|
| 1959 | 37.6      | ---            | 2.89                    |
| 1966 | 41.1      | 2.5            | 2.64                    |
| 1972 | 50.3      | 2.9            | 2.16                    |
| 1978 | 72.7      | 6.2            | 1.49                    |
| 1980 | 86.1      | 9.3            | 1.26                    |
| 1984 | 108.5     | 4.3            | 1.00                    |

Source: Economic Report of the President, 1986, Table B-4.

Gross National Product  
(1982 Dollars)

| Year  | GNP     | Percent Change<br>from prior year |
|-------|---------|-----------------------------------|
| ----- |         |                                   |
| 1947  | 1,066.7 |                                   |
| 1948  | 1,108.7 | 3.94                              |
| 1949  | 1,109.0 | 0.03                              |
| 1950  | 1,203.7 | 8.54                              |
| 1951  | 1,328.2 | 10.34                             |
| 1952  | 1,380.0 | 3.90                              |
| 1953  | 1,435.3 | 4.01                              |
| 1954  | 1,416.2 | -1.33                             |
| 1955  | 1,494.9 | 5.56                              |
| 1956  | 1,525.7 | 2.06                              |
| 1957  | 1,551.1 | 1.66                              |
| 1958  | 1,539.3 | -0.76                             |
| 1959  | 1,629.1 | 5.83                              |
| 1960  | 1,665.3 | 2.22                              |
| 1961  | 1,708.7 | 2.61                              |
| 1962  | 1,799.4 | 5.31                              |
| 1963  | 1,873.3 | 4.11                              |
| 1964  | 1,973.3 | 5.34                              |
| 1965  | 2,087.6 | 5.79                              |
| 1966  | 2,208.3 | 5.78                              |
| 1967  | 2,271.4 | 2.86                              |
| 1968  | 2,365.6 | 4.15                              |
| 1969  | 2,423.3 | 2.44                              |
| 1970  | 2,416.2 | -0.29                             |
| 1971  | 2,484.8 | 2.84                              |
| 1972  | 2,608.5 | 4.98                              |
| 1973  | 2,744.0 | 5.19                              |
| 1974  | 2,729.4 | -0.53                             |
| 1975  | 2,695.0 | -1.26                             |
| 1976  | 2,826.7 | 4.89                              |
| 1977  | 2,958.6 | 4.67                              |
| 1978  | 3,115.2 | 5.29                              |
| 1979  | 3,192.3 | 2.47                              |
| 1980  | 3,187.2 | -0.16                             |
| 1981  | 3,248.8 | 1.93                              |
| 1982  | 3,166.0 | -2.55                             |
| 1983  | 3,279.1 | 3.57                              |
| 1984  | 3,489.9 | 6.43                              |

Source: Economic Report of the President; February 1987,  
Table B-11, p.257.

# APPENDIX C

## Cities Reporting Significant Increases in Land Area Between 1970 and 1979

|             | Land Area as<br>of 12/31/79<br>Square Miles | Estimated<br>Net Increase<br>Since 1970<br>Square Miles | Estimated<br>Net Increase<br>Since 1970<br>% |
|-------------|---------------------------------------------|---------------------------------------------------------|----------------------------------------------|
| San Antonio | 263.6                                       | 79.6                                                    | 43.26                                        |
| Columbus    | 180.0                                       | 45.4                                                    | 33.70                                        |
| Phoenix     | 321.9                                       | 74.0                                                    | 29.85                                        |
| Memphis     | 280.8                                       | 63.4                                                    | 29.16                                        |
| Houston     | 536.6                                       | 102.7                                                   | 23.67                                        |
| Dallas      | 346.2                                       | 80.6                                                    | 23.28                                        |
| Denver      | 111.2                                       | 16.0                                                    | 16.80                                        |
| Ft. Worth   | 237.5                                       | 32.5                                                    | 15.85                                        |
| San Jose    | 156.8                                       | 20.6                                                    | 15.12                                        |

Note: 1979 if the most recent year for which data are available.

Source: US Bureau of the Census, Boundary and Annexation  
Survey 1970-79, Report GE 30-4 (Washington, DC: USGPO, 1980)

## APPENDIX D

### Downtown Retail Markets Information

Information on downtown retail markets is available for some of cities in this study. The following tables are included:

Total downtown retail sales volume: 1982  
Change in downtown retail sales volume: 1977-82  
Percentage change in downtown retail sales: 1977-82  
Total number of downtown retail stores: 1982  
Downtown sales per retail employee: 1982  
Percentage change in sales per downtown retail employee: 1977-82  
Downtown eating and drinking places sales: 1982  
Percentage change in downtown eating and drinking places sales: 1977-82

Source for these tables: Downtown Retail Market, Downtown Research Corporation, May 1986.

TABLE 1. Total Downtown Retail Sales Volume: 1982  
(Thousands of Constant 1977 Dollars)

| City          | 1982      | Rank |
|---------------|-----------|------|
| NEW YORK CITY | 3,023,727 | 1    |
| CHICAGO*      | 978,313   | 2    |
| PHILADELPHIA  | 669,363   | 3    |
| SAN FRANCISCO | 654,931   | 4    |
| BOSTON*       | 548,344   | 5    |
| LOS ANGELES   | 405,009   | 6    |
| WASHINGTON    | 365,042   | 7    |
| NEW ORLEANS   | 308,105   | 8    |
| PITTSBURGH    | 304,575   | 9    |
| MINNEAPOLIS   | 256,175   | 10   |
| SEATTLE       | 239,949   | 11   |
| CLEVELAND     | 239,828   | 12   |
| HOUSTON       | 202,249   | 13   |
| CINCINNATI    | 186,054   | 14   |
| DALLAS        | 184,861   | 15   |
| PHOENIX       | 170,236   | 16   |
| DENVER        | 168,352   | 17   |
| ATLANTA       | 156,493   | 18   |
| SAN ANTONIO   | 156,261   | 19   |
| BALTIMORE     | 154,947   | 20   |
| DETROIT       | 145,008   | 21   |
| StLOUIS       | 133,330   | 22   |
| MILWAUKEE     | 126,508   | 23   |
| COLUMBUS      | 114,876   | 24   |
| SAN DIEGO     | 113,654   | 25   |
| INDIANAPOLIS  | 101,155   | 26   |
| BUFFALO       | 82,483    | 27   |
| FORT WORTH    | 79,592    | 28   |
| StPAUL        | 63,923    | 29   |
| KANSAS CITY   | 62,754    | 30   |

Note: Minneapolis and St.Paul are reported separately on this table  
 \* Data for downtown Chicago include the N. Michigan Ave. area sales.  
 Data for Boston include estimates of the Back Bay area sales.

Source: Downtown Research Corporation, Downtown Retail Markets, 1986;  
 analysis of the 1982 Census of Retail Trade



TABLE 2. Change in Downtown Retail Sales Volume: 1977-82  
(Thousands of Constant 1977 Dollars)

| City          | Change    | Rank |
|---------------|-----------|------|
| NEW YORK CITY | 41,005    | 1    |
| FORT WORTH    | (6,926)   | 2    |
| PHOENIX       | (26,502)  | 3    |
| StPAUL        | (27,294)  | 4    |
| KANSAS CITY   | (28,392)  | 5    |
| BALTIMORE     | (39,320)  | 6    |
| BUFFALO       | (40,388)  | 7    |
| DENVER        | (41,667)  | 8    |
| SEATTLE       | (48,768)  | 9    |
| MILWAUKEE     | (49,506)  | 10   |
| BOSTON*       | (52,334)  | 11   |
| DALLAS        | (57,681)  | 12   |
| CINCINNATI    | (65,878)  | 13   |
| MINNEAPOLIS   | (68,652)  | 14   |
| CLEVELAND     | (73,785)  | 15   |
| SAN ANTONIO   | (74,844)  | 16   |
| StLOUIS       | (75,899)  | 17   |
| INDIANAPOLIS  | (79,980)  | 18   |
| HOUSTON       | (90,744)  | 19   |
| COLUMBUS      | (92,386)  | 20   |
| DETROIT       | (96,721)  | 21   |
| NEW ORLEANS   | (100,423) | 22   |
| PITTSBURGH    | (107,812) | 23   |
| WASHINGTON    | (111,316) | 24   |
| ATLANTA       | (114,008) | 25   |
| LOS ANGELES   | (126,356) | 26   |
| CHICAGO*      | (137,687) | 27   |
| PHILADELPHIA  | (168,821) | 28   |
| SAN FRANCISCO | (175,830) | 29   |
| SAN DIEGO     | NA        |      |

Note: Minneapolis and St. Paul are reported separately on this table  
 \* Data for Chicago N. Michigan Ave. 1977 sales and for Boston Back Bay 1982 sales are estimated.

TABLE 3. Percentage Change in Downtown Retail Sales: 1977-82  
(Thousands of Constant 1977 Dollars)

| City          | %<br>Change | Rank |
|---------------|-------------|------|
| NEW YORK CITY | 1.4         | 1    |
| FORT WORTH    | -8.0        | 2    |
| BOSTON*       | -8.7        | 3    |
| CHICAGO*      | -12.3       | 4    |
| PHOENIX       | -13.5       | 5    |
| SEATTLE       | -16.9       | 6    |
| DENVER        | -19.8       | 7    |
| PHILADELPHIA  | -20.1       | 8    |
| BALTIMORE     | -20.2       | 9    |
| MINNEAPOLIS   | -21.1       | 10   |
| SAN FRANCISCO | -21.2       | 11   |
| WASHINGTON    | -23.4       | 12   |
| CLEVELAND     | -23.5       | 13   |
| LOS ANGELES   | -23.8       | 14   |
| DALLAS        | -23.8       | 14   |
| NEW ORLEANS   | -24.6       | 16   |
| PITTSBURGH    | -26.1       | 17   |
| CINCINNATI    | -26.1       | 17   |
| MILWAUKEE     | -28.1       | 19   |
| StPAUL        | -29.9       | 20   |
| HOUSTON       | -31.0       | 21   |
| KANSAS CITY   | -31.2       | 22   |
| SAN ANTONIO   | -32.4       | 23   |
| BUFFALO       | -32.9       | 24   |
| StLOUIS       | -36.3       | 25   |
| DETROIT       | -40.0       | 26   |
| ATLANTA       | -42.1       | 27   |
| INDIANAPOLIS  | -44.2       | 28   |
| COLUMBUS      | -44.6       | 29   |
| SAN DIEGO     | NA          | 30   |

Note: Minneapolis and St.Paul are reported separately on this table  
\* Data for Chicago N.Michigan Ave. 1977 sales and for Boston Back Bay 1982 sales are estimated.

Source: Downtown Research Corporation, Downtown Retail Markets, 1986; analysis of the 1982 Census of Retail Trade

Table 4. Total Number of Downtown Retail Stores: 1982

| City          | Number of<br>Retail<br>Stores | Rank |
|---------------|-------------------------------|------|
| NEW YORK CITY | 4,152                         | 1    |
| PHILADELPHIA  | 1,445                         | 2    |
| SAN FRANCISCO | 1,330                         | 3    |
| CHICAGO*      | 1,251                         | 4    |
| LOS ANGELES   | 1,030                         | 5    |
| BOSTON*       | 985                           | 6    |
| WASHINGTON    | 726                           | 7    |
| NEW ORLEANS   | 618                           | 8    |
| CLEVELAND     | 467                           | 9    |
| PITTSBURGH    | 455                           | 10   |
| BALTIMORE     | 452                           | 11   |
| MINNEAPOLIS   | 449                           | 12   |
| SEATTLE       | 423                           | 13   |
| PHOENIX       | 398                           | 14   |
| DETROIT       | 361                           | 15   |
| SAN DIEGO     | 357                           | 16   |
| MILWAUKEE     | 350                           | 17   |
| ATLANTA       | 346                           | 18   |
| CINCINNATI    | 338                           | 19   |
| HOUSTON       | 326                           | 20   |
| DENVER        | 314                           | 21   |
| SAN ANTONIO   | 286                           | 22   |
| StLOUIS       | 277                           | 23   |
| DALLAS        | 273                           | 24   |
| INDIANAPOLIS  | 262                           | 25   |
| BUFFALO       | 237                           | 26   |
| COLUMBUS      | 178                           | 27   |
| KANSAS CITY   | 164                           | 28   |
| StPAUL        | 153                           | 29   |
| FORT WORTH    | 116                           | 30   |

Note: Minneapolis and St. Paul are reported separately on this table  
 \*Includes N. Michigan Ave. are for Chicago and estimate for Boston  
 Back Bay area.

Source: Downtown Research Corporation, Downtown Retail Markets, 1986;  
 analysis of the 1982 Census of Retail Trade

Table 5. Downtown Sales per Retail Employee: 1982  
(Sales in Constant 1977 Dollars)

| City          | Sales<br>per<br>Employee | Rank |
|---------------|--------------------------|------|
| FORT WORTH    | 45,300                   | 1    |
| NEW YORK CITY | 43,012                   | 2    |
| SAN FRANCISCO | 42,561                   | 3    |
| DALLAS        | 40,065                   | 4    |
| LOS ANGELES   | 39,676                   | 5    |
| CHICAGO*      | 36,453                   | 6    |
| HOUSTON       | 36,052                   | 7    |
| PHOENIX       | 35,892                   | 8    |
| COLUMBUS      | 35,141                   | 9    |
| WASHINGTON    | 34,552                   | 10   |
| SEATTLE       | 34,426                   | 11   |
| INDIANAPOLIS  | 33,730                   | 12   |
| BOSTON*       | 33,385                   | 13   |
| SAN ANTONIO   | 32,027                   | 14   |
| MINNEAPOLIS   | 30,950                   | 15   |
| PHILADELPHIA  | 30,549                   | 16   |
| MILWAUKEE     | 30,469                   | 17   |
| CINCINNATI    | 30,292                   | 18   |
| BALTIMORE     | 29,621                   | 19   |
| DENVER        | 29,324                   | 20   |
| DETROIT       | 28,228                   | 21   |
| SAN DIEGO     | 27,660                   | 22   |
| PITTSBURGH    | 27,621                   | 23   |
| StLOUIS       | 27,553                   | 24   |
| StPAUL        | 27,529                   | 25   |
| ATLANTA       | 26,004                   | 26   |
| NEW ORLEANS   | 25,796                   | 27   |
| BUFFALO       | 22,969                   | 28   |
| KANSAS CITY   | 20,670                   | 29   |
| CLEVELAND     | NA                       |      |

Note: Minneapolis and St.Paul are reported separately on this table  
 \* Data unavailable and excluded for N.Michigan Ave. area of Chicago and  
 for Back Bay area of Boston.

Source: Downtown Research Corporation, Downtown Retail Markets, 1986;  
 analysis of the 1982 Census of Retail Trade

Table 6. Percentage Change in Sales per Downtown Retail Employee: 1977-8  
(Sales in Constant 1977 Dollars)

| City          | %<br>Change | Rank |
|---------------|-------------|------|
| HOUSTON       | 46.1        | 1    |
| MILWAUKEE     | 28.1        | 2    |
| FORT WORTH    | 25.7        | 3    |
| CINCINNATI    | 18.2        | 4    |
| COLUMBUS      | 16.0        | 5    |
| BALTIMORE     | 12.5        | 6    |
| MINNEAPOLIS   | 11.7        | 7    |
| NEW YORK CITY | 7.9         | 8    |
| CHICAGO*      | 6.7         | 9    |
| BOSTON*       | 5.2         | 10   |
| DALLAS        | 2.0         | 11   |
| SEATTLE       | 1.8         | 12   |
| WASHINGTON    | -2.2        | 13   |
| INDIANAPOLIS  | -2.5        | 14   |
| PHOENIX       | -2.8        | 15   |
| StPAUL        | -5.0        | 16   |
| BUFFALO       | -5.1        | 17   |
| SAN FRANCISCO | -7.0        | 18   |
| LOS ANGELES   | -8.7        | 19   |
| StLOUIS       | -9.1        | 20   |
| SAN ANTONIO   | -10.8       | 21   |
| KANSAS CITY   | -10.8       | 22   |
| PITTSBURGH    | -11.8       | 23   |
| PHILADELPHIA  | -12.3       | 24   |
| DENVER        | -13.2       | 25   |
| DETROIT       | -17.9       | 26   |
| ATLANTA       | -19.8       | 27   |
| NEW ORLEANS   | -22.6       | 28   |
| SAN DIEGO     | NA          |      |
| CLEVELAND     | NA          |      |

Note: Minneapolis and St.Paul are reported separately on this table  
\* Data unavailable and excluded for N.Michigan Ave. area of Chicago and  
for Back Bay area of Boston.

Source: Downtown Research Corporation, Downtown Retail Markets, 1986;  
analysis of the 1982 Census of Retail Trade



Table 7. Downtown Eating and Drinking Place Sales: 1982  
(In Thousands of Constant 1977 Dollars)

| City          | 1982<br>Sales | Rank |
|---------------|---------------|------|
| NEW YORK CITY | 480,052       | 1    |
| CHICAGO*      | 155,888       | 2    |
| SAN FRANCISCO | 127,978       | 3    |
| PHILADELPHIA  | 118,091       | 4    |
| BOSTON*       | 111,258       | 5    |
| WASHINGTON    | 85,764        | 6    |
| LOS ANGELES   | 62,915        | 7    |
| PITTSBURGH    | 47,698        | 8    |
| MINNEAPOLIS   | 43,151        | 9    |
| ATLANTA       | 41,757        | 10   |
| HOUSTON       | 41,078        | 11   |
| CLEVELAND     | 39,656        | 12   |
| DETROIT       | 39,009        | 13   |
| StLOUIS       | 35,817        | 14   |
| CINCINNATI    | 35,219        | 15   |
| DENVER        | 33,150        | 16   |
| BALTIMORE     | 33,091        | 17   |
| SAN DIEGO     | 32,726        | 18   |
| SEATTLE       | 32,313        | 19   |
| PHOENIX       | 28,460        | 20   |
| INDIANAPOLIS  | 25,990        | 21   |
| SAN ANTONIO   | 24,873        | 22   |
| MILWAUKEE     | 23,492        | 23   |
| COLUMBUS      | 15,750        | 24   |
| BUFFALO       | 14,058        | 25   |
| KANSAS CITY   | 10,947        | 26   |
| StPAUL        | 8,619         | 27   |
| FORT WORTH    | 6,340         | 28   |
| NEW ORLEANS   | NA            |      |
| DALLAS        | NA            |      |

Note: Minneapolis and St.Paul are reported separately on this table  
\* Data for Chicago N.Michigan Ave. 1977 sales and for Boston Back Bay 1982 sales are estimated.

Source: Downtown Research Corporation, Downtown Retail Markets, 1986; analysis of the 1982 Census of Retail Trade

Table 8. Percent Change in Downtown Eating and Drinking Place Sales: 1977-  
(In Thousands of Constant 1977 Dollars)

| City          | %<br>Change | Rank |
|---------------|-------------|------|
| HOUSTON       | 19.0        | 1    |
| StLOUIS       | 8.8         | 2    |
| BALTIMORE     | 7.7         | 3    |
| FORT WORTH    | 6.8         | 4    |
| DENVER        | 4.1         | 5    |
| BOSTON*       | 3.9         | 6    |
| CINCINNATI    | 2.1         | 7    |
| MINNEAPOLIS   | -1.2        | 8    |
| CHICAGO*      | -2.6        | 9    |
| LOS ANGELES   | -5.8        | 10   |
| ATLANTA       | -6.1        | 11   |
| SAN ANTONIO   | -6.7        | 12   |
| INDIANAPOLIS  | -9.9        | 13   |
| PHILADELPHIA  | -10.6       | 14   |
| NEW YORK CITY | -10.7       | 15   |
| SEATTLE       | -10.8       | 16   |
| PHOENIX       | -12.0       | 17   |
| SAN FRANCISCO | -13.1       | 18   |
| PITTSBURGH    | -13.6       | 19   |
| BUFFALO       | -16.5       | 20   |
| WASHINGTON    | -19.4       | 21   |
| DETROIT       | -21.1       | 22   |
| COLUMBUS      | -21.9       | 23   |
| CLEVELAND     | -22.6       | 24   |
| MILWAUKEE     | -23.2       | 25   |
| KANSAS CITY   | -34.9       | 26   |
| StPAUL        | -36.2       | 27   |
| NEW ORLEANS   | NA          |      |
| DALLAS        | NA          |      |
| SAN DIEGO     | NA          |      |

Note: Minneapolis and St.Paul are reported separately on this table  
\* Data for Chicago N.Michigan Ave. 1977 sales and for Boston Back Bay  
1982 sales are estimated.

Source: Downtown Research Corporation, Downtown Retail Markets, 1986;  
analysis of the 1982 Census of Retail Trade

# APPENDIX E

## Total Employment in Metropolitan Areas and Non-metropolitan Areas

### Rates of change (%)

|                 | 1969-84 | 1969-72 | 1972-78 | 1978-84 |
|-----------------|---------|---------|---------|---------|
| Metro areas     | 34.17   | 3.19    | 16.15   | 11.94   |
| Non-metro areas | 26.66   | 4.61    | 15.20   | 5.10    |

### Levels

|                 | 1969       | 1972       | 1978       | 1984       |
|-----------------|------------|------------|------------|------------|
| Metro areas     | 70,246,721 | 72,485,752 | 84,194,273 | 94,248,693 |
| Non-metro areas | 19,139,879 | 20,022,948 | 23,065,727 | 24,243,207 |

Source: US Department of Commerce, Bureau of Economic Analysis,  
Regional Economic Information System













